GROUNDWATER INVESTIGATION REPORT

Cometco Corporation 1509 West Cortland Street Chicago, Illinois 60622 LPC #0316005505

Prepared for:

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FOREWORD

On behalf of Metal Management Midwest, Inc. (MMMI), CPI Environmental Services, Inc. (CPI) has completed this *Groundwater Investigation Report* for MMMI's property referred to as Cometco Corporation located at 1509 Cortland Street in Chicago, Illinois (subject property). Refer to Figure 1 for subject property location map.

On June 28, 2001, MMMI, the Remediation Applicant (RA), enrolled the subject property into the Illinois Environmental Protection Agency's (IEPA) Site Remediation Program (SRP). A Comprehensive Site Investigation Report was prepared and submitted to the IEPA in June 2001. IEPA in a letter dated December 12, 2001, requested completion of additional groundwater investigation prior to approval of the Comprehensive Site Investigation Report. In response to IEPA's request, a Groundwater Investigation Plan was submitted to the IEPA on January 30, 2002. The Groundwater Investigation Plan was approved by IEPA in a letter dated February 20, 2002. Groundwater investigation activities were completed in accordance with the Groundwater Investigation Plan in April and May 2002. This report presents the results of the groundwater investigation.

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EXECUTIVE SUMMARY

In response to IEPA's request, CPI on behalf of MMMI characterized hydrogeologic conditions at the subject property and evaluated water well survey data. In accordance with 35 IAC Section 620.220, the groundwater at the subject property is classified as Class II: General Resource Groundwater.

In accordance with *Groundwater Investigation Plan*, five monitoring wells (MW-6 through MW-10) were installed at the subject property. No Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), or Polychlorinated Biphenyls (PCBs) were detected in groundwater samples collected from monitoring wells MW-6 through MW-10. Metal concentrations were below laboratory detection limits except for arsenic and barium. However, concentrations of arsenic and barium do not exceed the Class I or Class II Groundwater Remediation Objectives. Therefore, development of remediation objectives for groundwater is not necessary.

Groundwater ingestion exposure route evaluation results indicate that conditions stipulated under 35 IAC Section 742.320 have been met. Therefore, the groundwater ingestion exposure route is not a complete pathway and is excluded from further consideration.

CPI Environmental Services, Inc. Project No. E-05-74-06-249

1.0 INTRODUCTION

1.1 Report Objectives

The objectives of this report are to address the requirements of 35 IAC 740 (b)(3), to evaluate the hydrogeologic characteristics of water bearing unit(s) at the subject property, to classify groundwater in accordance with 35 IAC 620.210 through 620.240, and to demonstrate that the conditions to exclude the groundwater ingestion exposure route as outlined in Section 742.320 (a) through (f) have been met.

1.2 Previous Groundwater Investigations

In March 2000, on behalf of MMMI Andrews Environmental Engineering, Inc. (Andrews) completed a soil and groundwater assessment at the subject property as part of an underground storage tank closure. A total of six soil borings and five monitoring wells (MW-1 through MW-5) were installed. Monitoring wells were sampled and groundwater samples were analyzed for the presence of benzene, toluene, ethylbenzne, total xylenes (BTEX) and polynuclear aromatic hydrocarbons (PNAs). No BTEX and PNA compounds were reported by Andrews to have been detected in the groundwater samples. The results of Andrews' investigation were presented in a *Site Classification Completion Report* dated March 2000.

2.0 GROUNDWATER INVESTIGATION ACTIVITIES

2.1 Soil Boring and Monitoring Well Installation

On April 24 and 25, 2002, five boreholes were drilled with a CME 45C drill rig equipped with hollow stem augers and 2-foot split spoon samplers. In accordance with the Groundwater Investigation Plan, boreholes were installed in previously identified areas of the property. Boreholes were continuously sampled to termination depth of 20 to 28 feet below ground surface. An Illinois certified geologist classified subsurface lithologies in accordance with Unified Soil Classification. Soil boring logs are included in Appendix A. In accordance with the *Groundwater Investigation Plan*, soil borings were converted to 2-inch diameter PVC monitoring wells. Monitoring well locations are shown on Figure 2. These monitoring wells were screened in the water bearing gray clay unit underlying the brown-gray, silty clay unit. Total well depth ranged from 20 to 28 feet below ground surface. Filter sand was placed in the annular space to approximately 2 feet above the screened interval. The remainder of the annular space was sealed with bentonite chips, hydrated in 6-inch lifts, and topped off with concrete slurry mix to ground surface in case of stick-up wells or to approximately 0.5 feet below the top of the casing in cases of flush-mount wells. Monitoring well construction reports are included in Appendix A.

Monitoring well MW-6 is located south of paint shop, downgradient of previously identified areas impacted with arsenic and PNA compounds. Monitoring well MW-7 is located northeast of the baler building along the riverbank, downgradient of previously identified areas (Area #1, Area #9, and Area #11) displaying elevated arsenic, lead, and PCB concentrations. Monitoring well MW-8 is located north of the central material storage area and downgradient of areas (Area #11 and Area #3) displaying elevated concentrations of metals and PCBs. Monitoring well MW-9 is located along the southern extent of the riverbank, downgradient of Area #2 and Area #11 where

elevated concentrations of metals and PCBs were detected. Monitoring well MW-10 is located on the southwest corner of the subject property downgradient of areas #6 and #1 displaying elevated lead and arsenic concentrations.

2.2 Well Development and Groundwater Sampling

Prior to groundwater sampling, groundwater monitoring wells were developed by surging for approximately 15 minutes and removing approximately five well volumes of water with a dedicated, disposable bailer.

One round of groundwater samples was collected from monitoring wells and submitted for laboratory analysis. Prior to sampling, monitoring wells were gauged with an electronic water level indicator and purged three to five well volumes using a disposable bailer.

Groundwater samples were transferred into the appropriate laboratory containers, preserved, and stored in a cooler with ice prior to shipment to First Environmental Laboratories in Naperville, Illinois. Appropriate quality assurance/quality control (QA/QC) procedures and chain-of-custody protocols were followed. For QA/QC purposes, a laboratory-prepared trip blank sample and a duplicate groundwater sample were submitted for analysis.

2.3 Geologic and Hydrogeologic Characterization

Subsurface geology at the subject property consists of fill material overlying disturbed brown-gray, mottled, silty clay followed by gray, clay till. Fill material consists of sand, gravel, cinder, and slag. It is dry to saturated and its thickness varies from 4 feet to 21 feet throughout the subject property with the thickest fill present along the riverbank. The thickness of the disturbed silty clay unit varies from 0 feet to 8 feet. No saturated zone was encountered in this unit. A glacial till, gray clay, unit underlies the upper silty clay confining unit. Wet to saturated intervals were encountered in the gray clay unit;

therefore, monitoring wells were screened in this unit. Due to presence of confining beds (i.e., brown-gray silty clay and gray clay units), the vertical movement of groundwater into and out of the screened interval is limited and the water pressure is greater than the atmospheric pressure in the monitoring wells at the subject property. As a result, the potentiometric surface stands above the top of the gray clay unit.

Depth-to-water levels and depth to bottom of the wells were measured and recorded upon completion of well development activities. In addition, CPI representative surveyed all monitoring wells to a local benchmark to define the relative ground surface and top of the casing elevations on April 30, 2002. Following table presents a summary of groundwater elevation data:

Well ID	Ground Surface* Elevation (feet)	TOC Elevation* (feet)	Depth to Water TOC (feet)	GW Elevation (feet)	Total Well Depth TOC / GS (feet)
MW-6	98.11	97.65	14.86	82.79	19.54/20
MW-7	96.67	96.25	19.78	76.47	22.58/23
MW-8**	97.55	97.10	0.97	96.13	19.55/20
MW-9	95.40	97.22	10.25	86.97	29.82/28
MW-10	97.42	99.92	6.26	93.66	25.5/23

^{*}Top of the casing (TOC)and Ground Surface (GS) elevations were measured relative to a benchmark with an assumed elevation of 100 feet.

Based on depth-to-water level measurements, groundwater elevations were calculated and used to prepare the potentiometric surface map presented in Figure 3. Based on the potentiometric surface map, groundwater at the subject property flows to the northeast toward the North Branch of Chicago River, under an average hydraulic gradient of 0.026 feet/feet.

^{**}Due to anomalously high groundwater elevation in monitoring well MW-8, the groundwater elevation at this well was not used during the preparation of potentiometric surface map.

2.3.1 Drawdown and Recovery Testing

CPI conducted hydraulic conductivity tests at two locations. Prior to performing these tests, depth-to-water levels in the monitoring wells were measured with an electronic water level indicator. In addition, total well depths were measured and recorded in the logbook. A transducer with an appropriate pressure range was introduced into monitoring wells MW-10 and MW-9 approximately one hour prior to test commencement. During each test, a data logger was used to record drawdown or recovery data. After proper configuration, the data logger was activated to record the results of a drawdown test. A 1¾-inch diameter, 37-inch long slug was rapidly introduced into the monitoring well and the drwadown rate of the aquifer was recorded for approximately one hour. Due to low recharge rate, depth-to-water level in the monitoring wells had not reached equilibrium prior to commencement of recovery testing. The recovery rate was recorded for approximately one hour and data collection was terminated.

Collected data was evaluated using Super Slug software based on the Cooper, Bredehoeft, and Papadopulos solution. The following table presents calculated hydraulic conductivity, transmissivity, storativity, and capacity of the water bearing formation in the immediate vicinity of the monitoring wells MW-10 and MW-9.

Well ID	Hydraulic Co	nductivity (K)	Transmissivity (T)	Storativity (s)	Capacity (Q)
Well 1D	(cm/sec)	(feet/day)	(ft²/sec)	Storativity (s)	(gal/day)
MW-10	8.28 x 10 ⁻⁷	2.35x10 ⁻³	8.15 x 10 ⁻⁷	5.54 x 10 ⁻⁴	0.08
MW-9	6.91 x 10 ⁻⁷	1.96x10 ⁻³	9.06 x 10 ⁻⁷	5.86 x 10 ⁻⁴	0.04

Slug test interpretation datasheets are presented in Appendix B.

2.3.2 Groundwater Classification

The groundwater at the subject property exhibits the following characteristics and meets the criteria as outlined under the 35 IAC Section 620.220, Class II: General Resource Groundwater:

- The groundwater at the subject property does not meet the provisions of Section 620.210 (Class I), Section 620.230 (Class III), or Section 620.240 (Class IV);
- The average in-situ hydraulic conductivity of the water bearing unit in the subject property is 7.59×10^{-7} cm/sec, which is less than the 10^{-4} cm/sec limit;
- The subject property is located outside a well protection area for a community water well supply;
- The subject property is not located in the minimum setback zone of a well, which serves as a potable water supply;
- No community or potable water supply wells are located within a 2,500-foot radius of the subject property. Based on water well survey information, there are three industrial wells (Well #9, 19, and 17) within 2,500-foot radius of the subject property. Well number 9, 19, and 17 are finished in bedrock at depths of 1610, 1616, and 1850 feet below ground surface, respectively. Well number 9 and 19 are located across the North Branch of Chicago River and well #17 is located cross-gradient of the subject property. A copy of water well survey information is included in Appendix C; and
- of Chicago obtains water from Lake Michigan and has a Potable Water Supply Well Ordinance that prohibits the installation of new potable water supply wells and the use of such wells within the City of Chicago by private entities, but allows the installation and use of new wells by the City of Chicago. A Memorandum Of Understanding (MOU) between the City of Chicago and IEPA was established in order to use the local Potable Water Supply Well Ordinance as an Institutional Control. The MOU has been in effect since July 3, 1997.

Therefore, the groundwater at the subject property is classified as a Class II Groundwater Resource.

2.4 Monitoring Well Abandonment

Five monitoring wells (MW-1 through MW-5) were installed during previous investigations by Andrews. However, only one (monitoring well MW-1) out of five wells was in place during the CPI groundwater investigation. The remaining monitoring wells MW-2 through MW-5 have either been destroyed or buried under fill material placed along the riverbank. In accordance with Illinois Water Well Construction Code 77 IAC Section 920.120, monitoring well MW-1 was abandoned on April 25, 2002. Water well sealing form is included in Appendix D. CPI will search for the remaining monitoring wells during site remediation activities and abandon these wells accordingly.

2.5 Decontamination

To prevent cross-contamination, drilling and sampling equipment was decontaminated between each borehole with a pressure washer. In addition, stainless steel split spoon samplers were washed with alconox and water solution and rinsed with water prior each use. Disposable dedicated bailers were used during well development and groundwater sampling activities. A new pair of disposable gloves was used at each monitoring well location during well development and sample collection.

2.6 Laboratory Analysis

Prior to sampling, groundwater monitoring wells were gauged with an electronic water level indicator and purged a minimum of three well volumes using a disposable bailer. In accordance with the *Groundwater Investigation Plan*, groundwater samples collected from monitoring wells MW-6 and MW-7 were analyzed for presence of dissolved metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) and polychlorinated biphenyls (PCBs). Groundwater samples collected from monitoring wells MW-8, MW-9, and MW-10 were analyzed for presence of VOCs, SVOCs, metals, and PCBs.

For QA/QC purposes, a laboratory prepared trip blank sample and a duplicate groundwater sample were submitted with the groundwater samples for analysis. The trip blank sample was analyzed for VOCs. The duplicate sample was collected from monitoring well MW-10 and analyzed for the same parameters.

2.7 Groundwater Analytical Results

No VOCs, SVOCs, or PCBs were detected in exceedance of laboratory detection limits in groundwater samples collected from monitoring wells MW-6 through MW-10. Except for barium and arsenic, no metals were detected in the groundwater samples. Barium concentrations exceeded the laboratory detection limit in the five monitoring wells and arsenic concentrations exceeded the laboratory detection limit in monitoring wells MW-7, MW-8, and MW-9. However, the concentrations of detected metals do not exceed the Class I or Class II Groundwater Remediation Objectives. A summary of groundwater analytical results is presented in Table 1. The groundwater analytical report and chain-of-custody form are included in Appendix E.

No VOCs were detected in the trip blank sample. The results of duplicate sample collected from monitoring well MW-10 were consistent with the MW-10 results.

2.8 Groundwater Ingestion Exposure Route Evaluation

Based on groundwater analytical results, no VOCs, SVOCs, or PCBs were detected in the groundwater samples collected from monitoring wells MW-6 through MW-10 and no metals were detected in excess of Class I or Class II groundwater remediation objectives in groundwater samples collected from monitoring wells MW-6 through MW-10. In accordance with 35 IAC Section 742.320, the groundwater ingestion exposure route can be excluded from considerations since the following criteria have been met:

a) The requirements of Sections 742.300 and 742.305 are met as demonstrated in the *Soil Remediation Objectives Report* dated January 30, 2002;

- b) No free product has been detected in the groundwater monitoring wells at the subject property;
- c) The subject property is not located within the minimum or designated maximum setback zone or within a regulated recharge area of a potable water supply well; and
- d) The subject property is located within the limits of the City of Chicago. The City of Chicago obtains water from Lake Michigan and has a Potable Water Supply Well Ordinance that prohibits the installation of new potable water supply wells and the use of such wells within the City of Chicago by private entities, but allows the installation and use of new wells by the City of Chicago. A Memorandum Of Understanding (MOU) between the City of Chicago and IEPA was established in order to use the local Potable Water Supply Well Ordinance as an Institutional Control. The MOU has been in effect since July 3, 1997.

Therefore, the groundwater ingestion exposure route is not considered a complete pathway and therefore, this route can be properly excluded from further consideration.

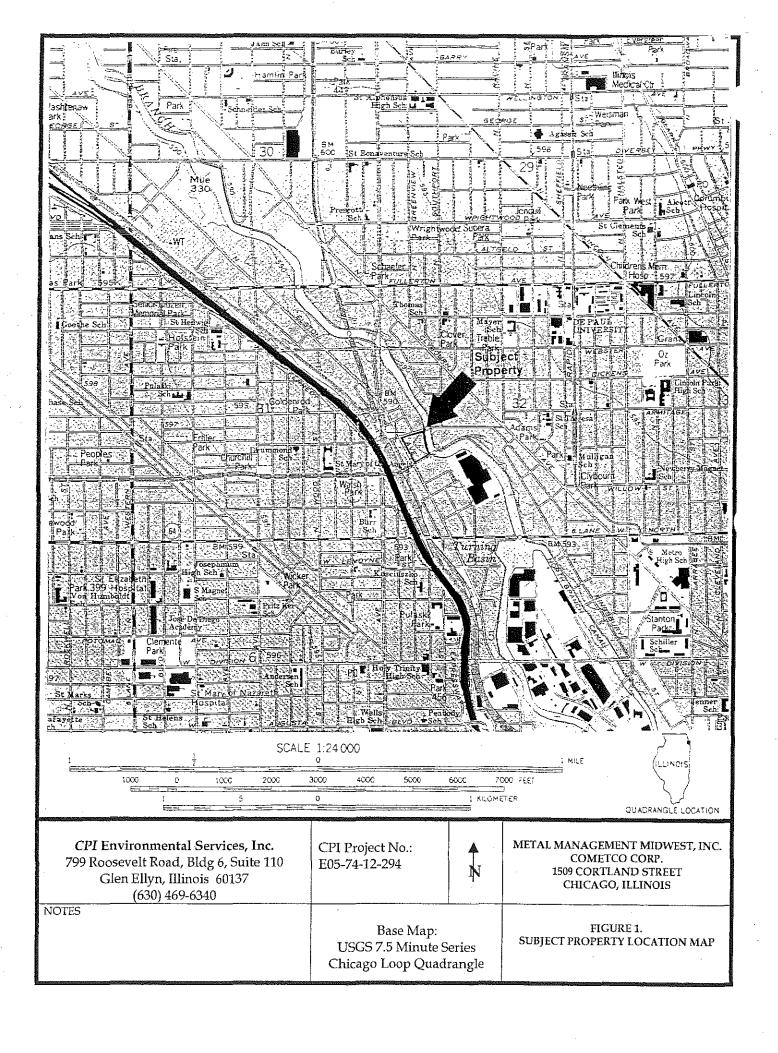
3.0 CONCLUSIONS

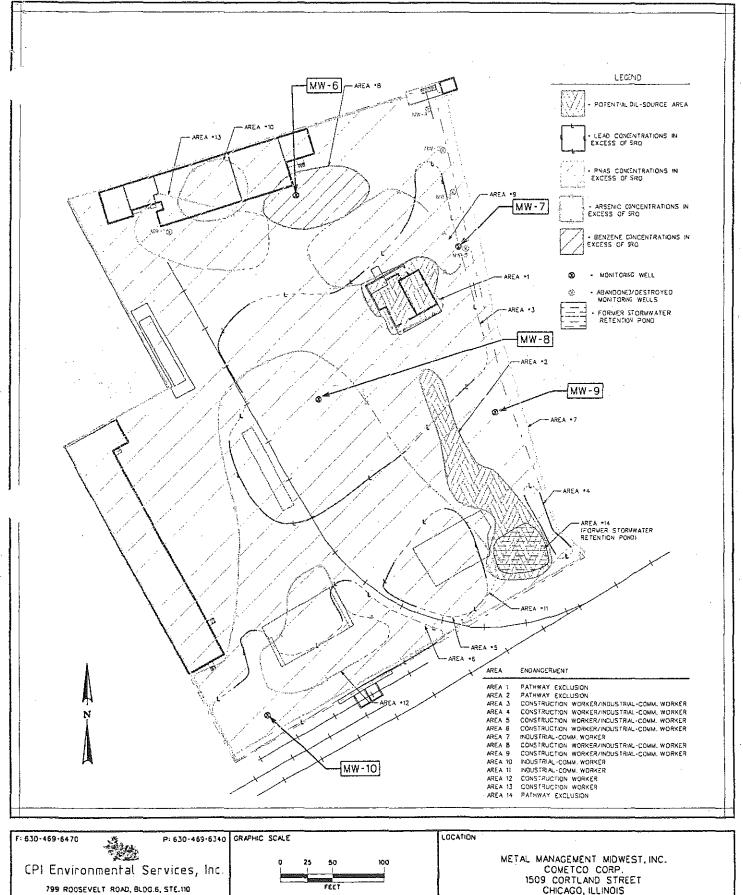
In accordance with 35 EAC Section 620.220, the groundwater at the subject property has been classified as Class II: General Resource Groundwater.

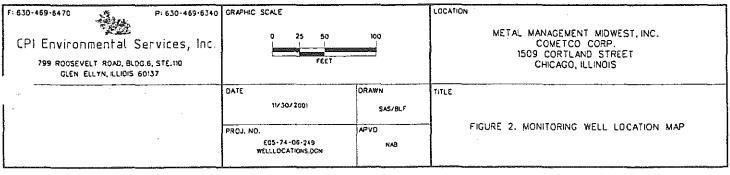
No VOCs, SVOCs, or PCBs were detected in the groundwater samples collected from monitoring wells MW-6 through MW-10. Metal concentrations were below laboratory detection limits except for arsenic and barium. However, concentrations of arsenic and barium do not exceed the Class I or Class II Groundwater Remediation Objectives.

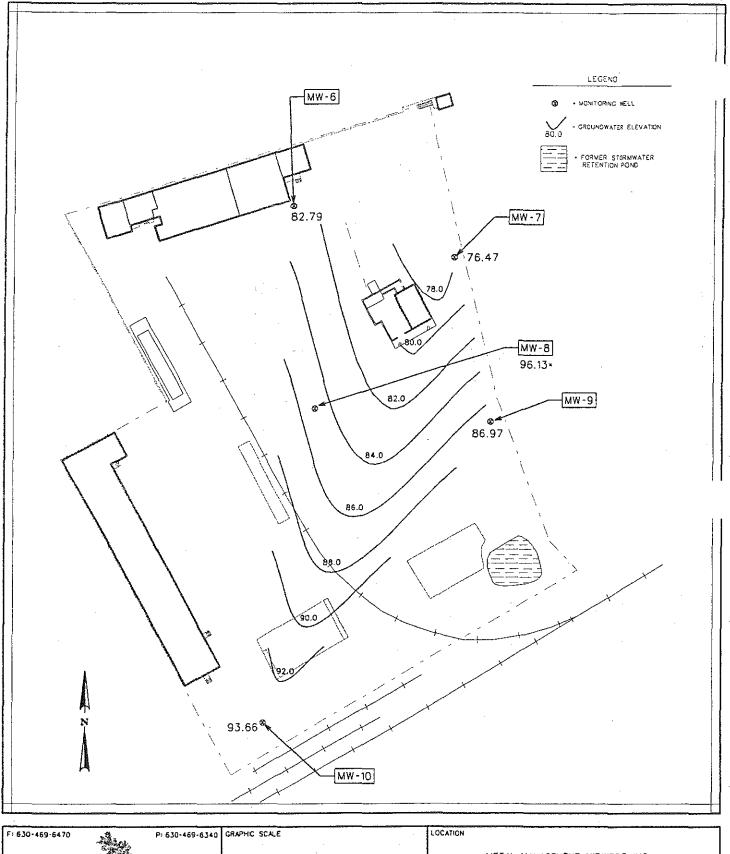
Groundwater ingestion exposure route evaluation results indicate that the conditions stipulated under 35 IAC Section 742.320 have been met. Therefore, the groundwater ingestion exposure route is not a complete pathway and is excluded from further consideration.

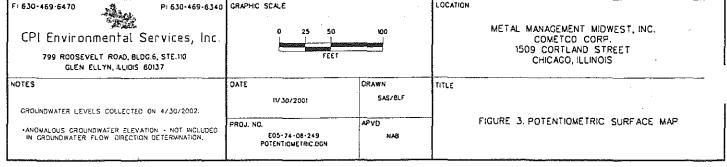
FIGURES











TABLES

Table 1
Summary of Groundwater Analytical Results -Tier 1 Evaluation
Cometco Corporation
1509 West Corland Street
Chicago, Illinois

			-					Tier I	GROs
Sample ID	MW-6	MW-7	MW-8	MW-9	MW-10	DUP	Trip Blank	Class I	Class II
Volatile Organic Compounds (VOCs)									
Acetone	T NA	NA	<0.01	<0.01	<0.01	<0.01	< 0.01	0.7	0.7
Benzenc	NA	NA	<0.005	< 0.005	< 0.005	<0.005	< 0.005	0.005	0.025
2-Butanone	NA	NA	<0.01	< 0.01	< 0.01	<0.01	< 0.01	NE	NE
Carbon disulfide	NA	NA	< 0.005	<0.005	< 0.005	< 0.005	< 0.005	0.7	3.5
Chloroform	NA	NA	< 0.001	< 0.001	<0.001	< 0.001	< 0.001	0.00002	0.0001
Chloromethane	NA	NA	< 0.01	< 0.01	<0.01	<0.01	< 0.01	NE	NE
1,1 Dichloroethane	NA	NA	< 0.005	< 0.005	< 0.005	<0.005	< 0.005	0.7	3.5
cis-1,2-Dichloroethene	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.07	0.2
Ethylbenzene	NA	NA	< 0.005	< 0.005	<0,005	<0.005	< 0.005	0.7	1.0
Tetrachlorgethene	NA	NA	< 0.005	<0.005	< 0.005	<0.005	< 0.005	0.005	0.025
Toluene	NA	NA	<0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.0	2.5
1,1,1-Trichloroethane	NA	NA	<0.005	<0.005	<0.005	< 0.005	< 0.005	0.2	1.0
Trichloroethene	NA	NA	<0.005	<0.005	< 0.005	< 0.005	<0.005	0.005	0.025
Vinyl Chloride	NA	NA	<0.002	< 0.002	< 0.002	<0.002	< 0.002	0.002	0.01
Xylenes (total)	NA	NA	<0.005	<0.005	<0.005	<0.005	<0,005	10.0	10.0
Semi-Volatile Organic Compounds (SVOCs)		(3-5/A-C-4)	10.44						
bis(2-ethylhexyl)phthalate	NA	T NA	<0.01	< 0.01	<0.01	<0.01	NA	0.0	0.1
Butyl benzyl phthalate	NA	NA	<0.01	< 0.01	< 0.01	<0.01	NA	1.4	7.0
4-Chloro-3-methylphenol	NA	NA	<0.02	<0.02	<0.02	<0.02	NA	NE	NE
Dibenzofuran	NA	NA	< 0.01	<0.01	< 0.01	< 0.01	NA	NE	NE
2,4-Dimethylphenol	NA	NA	<0.01	<0.01	< 0.01	< 0.01	NA	NE	NE
Di-n-butylphthalate	NA	NA	< 0.01	< 0.01	< 0.01	< 0.01	NA	NE	NE
Di-n-octyl phthalene	NA	NA	< 0.01	< 0.01	<0.01	< 0.01	NA	0.14	0.07
2-Methylnaphthalene	NA	NA	<0.01	<0.01	< 0.01	<0.01	NA	NE	NE
3&4-Methylphenol	NA	NA	< 0.01	< 0.01	< 0.01	< 0.01	NA	NE	NE
Naphthalene	NA	NA	<0.01	< 0.01	< 0.01	<0.01	NA NA	0.025	0.039
Phenol	NA	NA	< 0.01	< 0.01	< 0.01	<0.01	NA	NE	NE
1,2,4-Trichlorobenzene	NA NA	NA	<0.01	< 0.01	< 0.01	< 0.01	NA	0.1	0.7

Summary of Groundwater Analytical Results -Tier 1 Evaluation Cometco Corporation 1509 West Corland Street Chicago, Illinois

								Tier	1 GROs
Sample ID	MW-6	MW-7	MW-8	MW-9	MW-10	DUP	Trip Blank	Class I	Class II
Polynuclear Aromatic Compounds (PNAs)		******		·					
Acenaphthene	NA	NÄ	<0.01	<0.01	< 0.01	<0,01	NA	0.42	2.1
Fluorene	NΛ	NA	<0,002	< 0.002	<0.002	< 0.002	NA	0.28	1.4
Phenanthrene	NA	ÑA	<0.005	<0.005	<0.005	<0.005	NA	NE	NE
Anthracene	NA	NA	< 0.005	< 0.005	< 0.005	<0.005	NA	2.1	10.5
Fluoranthene	NA :	NA	< 0.002	< 0.002	< 0.002	<0.002	NA	0.28	1.4
Pyrene	NA	NA	< 0.002	< 0.002	<0.002	< 0.002	NA	0.21	1.05
Benzo(a)anthracene	NA	NA	< 0.00013	< 0.00013	<0,00013	< 0.00013	NA	0.00013	0.00065
Chrysene	NA	NA	< 0.0015	< 0.0015	<0.0015	<0.0015	NA	0.0015	0.0075
Benzo(b)fluoranthene	NA	NA	<0.00018	< 0.00018	< 0.00018	<0.00018	NA	0.00018	0.0009
Benzo(k)fluoranthene	NA	NA	< 0.00017	<0.00017	< 0.00017	< 0.00017	NA	0.00017	0.00085
Benzo(a)pyrene	NA	NA	< 0.0002	< 0.0002	< 0.0002	< 0.0002	_NA	0.0002	0.002
Indeno (1,2,3-c,d)pyrene	NA	NA	< 0.0003	<0.0003	< 0.0003	<0.0003	NA	0.00043	0.00215
Dibenzo(a, h)anthracene	NA	NΑ	<0.0003	< 0.0003	<0.0003	<0.0003	NA	0.0003	0.0015
Benzo(g,h,i)perylene	NA	NA	<0.0004	<0.0004	<0.004	< 0.0004	NA	NE	NE
Polyschlorinated biphenyls (PCBs)									
Total PCBs								0.0005	0.0025
Aroclor 1016	< 0.0005	< 0.0005	<0.0005	<0:0005	<0.0005	< 0.0005	NA	NE	NE
Aroclor 1221	<0.0005	<0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	NA	NE	NE
Aroclor 1232	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	NA	NE	NE
Aroclor 1242	< 0.0005	<0,0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	NA	NE	NE
Aroclor 1248	< 0.0005	<0.0005	< 0.0005	< 0.0005	< 0.0005	<0.0005	NA	NE	NE
Aroclor 1254	< 0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NA	NE	NE
Aroclor 1260	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	< 0.0005	NA	NE	NE
Dissolved Metals	····								
Arsenic	<0.002	0.004	0.004	0,008	<0.002	0.003	NA	0.05	0.2
Barium	().047	0.082	0.032	0.249	0.025	0.025	NA	2	2
Cadmium	< 0.001	<0.001	< 0.001	< 0.001	<0.001	<0.001	NA	0.005	0.05
Chromium	< 0.001	< 0.001	<0.001	0.002	<0.001	<0.001	NA	0.1	1
Chromium, hexavalent	<0.005	< 0.005	<0.005	<0.005	<0.005	< 0.005	NA	NE	NE
Chromium, trivalent	< 0.005	<0.005	<0.005	< 0.005	<0.005	<0.005	NA	NE	NE
Lead	<0.002	< 0.002	<0.002	< 0.002	<0.002	<0.002	NA	0.0075	0.1
Mercury	<0.0005	< 0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NA NA	0.07	2
Selenium	<0.002	<0.002	<0.002	< 0.002	<0.002	<0.002	NA NA	0.05	0.05
Silver	< 0.001	<0.001	< 0.002	<0.001	<0.001	<0.002	NA NA	0.05	NE NE

Results were compared to Groundwater Remediation Objectives (GROs) (35 IAC 742, Appendix B, Vable E, IPCB 2001).

Samples were collected on 04/29/02.

All values are in mg/L.

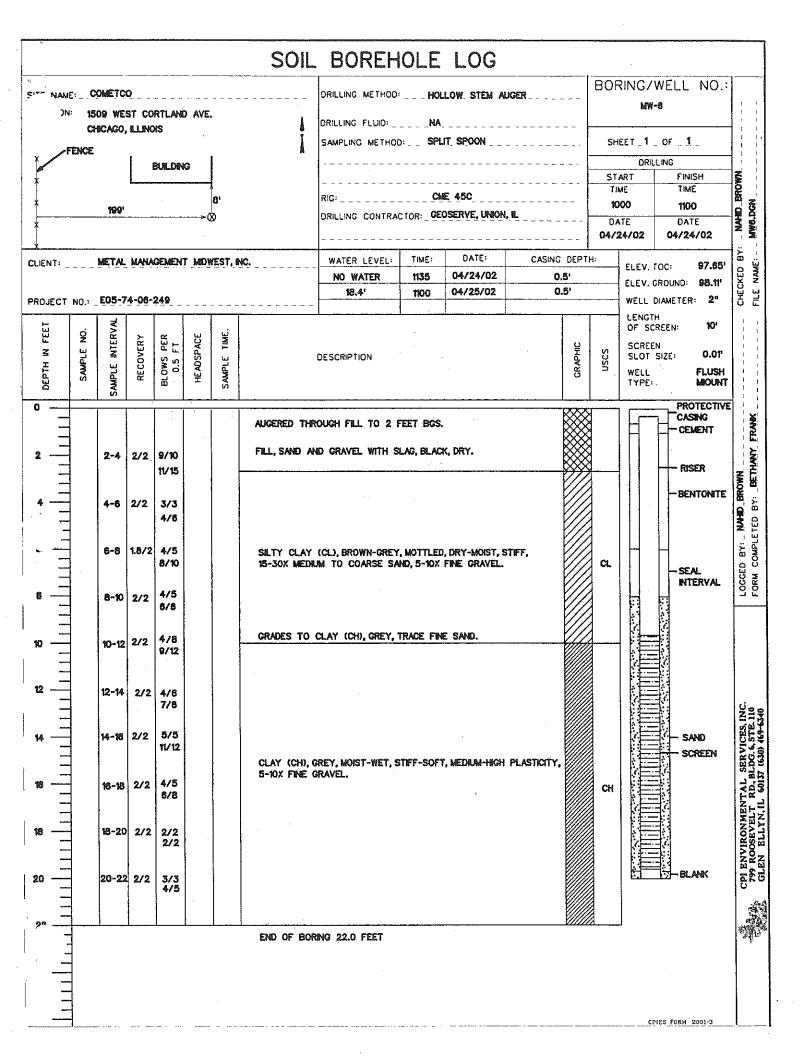
NA = Not Analyzed in accordance with the Groundwater Investigation Plan

NE = Not Established

Duplicate sample was collected from monitoring well MW-10.

APPENDIX A

SOIL BORING LOGS AND MONITORING WELL CONSTRUCTION REPORTS



T. 1 TO 10 T			-		SOIL	BOREH	<u> 10LE</u>	LOG						
TE NAME: _ C	OMETCO O9 WEST CO					ORILLING METHOD				-	30R	ING/V	VELL NO.: 7	
CH	ecago, elek	XS			SHORING Å	SAMPLING METHO					SHE	ет_ <u>1</u> _	OF _ 1 _	1
	BALEF	₹	8' S1'	, PIVI		RIG:	CWE	45C		· · ·	STA TIM 120	E 10	FINISH TIME 1325 DATE	NAHID BROWN
			MOORR			WATER LEVEL:	TIME:	DATE:	CASING DE		04/2		04/24/02	BY:
	METAL MANA E05-74-06-					WAIEN LEVEL	1 11014		Wron. C.				OC: 98.25' ROUND: 96.67' AMETER: 2"	8
SAMPLE NO.	SAMPLE INTERVAL RECOVERY	BLOWS PER 0.5 FT	HEADSPACE	SAMPLE TIME.		DESCRIPTION				CRAPHIC		LENGTH OF SCR SCREEN SLOT S WELL TYPE:	EEN: 10'	
					AUGERED THR	ROUGH FILL TO 4	FEET BOS.						PROTECTIVE CASING CEMENT	144
	4-6 0.5/2 6-8 1.8/2					NO GRAVEL, CINDER TED. SELT AND SAND, 5			CLAY,				RISER - BENTONITE	NACES CEL. NO 05000
	8-10 0/2 10-12 1/2	4/5 6/9			SETY CLAY	(CL), BROWN-GREY	MOTTLED, D	RY-MOIST. ST	#F.		2	-	- SEAL Interval	Č
	12-14 2/2 14-16 0.1/2	2/2 3/3 2/2 2/2				M-COARSE SAND, E					CL.		AART.	OM SECTION
	16-18 0.2/2	1/1 2/2	-			REY, MOIST-WET, M PLASTICITY, (5% F		-SOFT,			СН		- SAND	
	18-20 2/2	0.2/2												
	20-22 2/2	3/3 4/3											_ BLANK	*
					END OF BORING	22.0 FEET			,					

4						_ BOREH				امع ا	216167	WELL NO.:
N: 1509 W	est cor	TLAND				ORILLING METHOD:					MM-	
•), illinoi:	S I	BALE	ER	7	SAMPLING METHO				SI	 ΙΕΕΤ _ <u>1</u> _	OF _ <u>1</u> _
BUILDING	}		BULD								DRIL	LING
											ART ME	FINISH
			144'		25'	RIG:				1	800	0800
	∞		••••		- '	DRILLING CONTRAC	CLOU: RET	DEVAC' OLEGIA' S		_	ATE	DATE
										04/	24/02	04/24/02
NT:META	L MANAG	EMENT	MEDM	EST, N	C	WATER LEVEL:	TIME:	DATE:	CASING DEP	TH:	ELEV.	roc: 97.10 '
						19.2	0930	04/24/02	0.5	•	ELEV.	GROUND: 97.55 '
JECT NO.: _ E05-	74-06-24	49				-						DIAMETER: 2"
NO.	1 .		ta	ائیا			-				LENGTH OF SCI	H REEN: 10'
LE NO.	RECOVERY	PER F1	HE ADSPACE	TIME.		055000071011			皇	S	SCREE	N SIZE: 0.01
SAMPLE AMPLE INTE	ECO.	BLOWS 0.5	SADS	SAMPLE		DESCRIPTION	*		GRAPHIC	USCS	WELL	312C+ U.U1
SAMPLE	"	ਲ	포	Š							TYPE:	Flush Mount
		· 1	. [.	ALIGERED THE	ROUGH FILL TO 2 F	EET BGS		——————————————————————————————————————	/ ×) [PROTECTIVE
=							1.75		\otimes	Ž		CEMENT
2-4	0/2	<u> </u>	ĺ		rel, sand a	NO GRAVEL WITH S	LAG, BLACK	, DRY.]
3				-			····	·		<u></u>		RISER
	2/2 1		Ì	- }								BENTONITE
-		0/11 2/13		ļ						1		
]	İ			ČE TV OLAV	(01) 50000 0000	MOZZ ED	DDV Dree				
6-8	2/2	5/6 8/8		[(CL), Brown-Grey, Edilmi Sand, (5% Fi				d CL	}-	
7						,						SEAL
B-10		5/8	l	ł	OBSTRUCTION	N AT 8'				1		INTERVAL
<u> </u>		7/9								1		
10-12	2/2	5/Q								2		
	2/2	5/9 10/11										
=				1								
12-14		5/5 6/7	l	ľ								
7												
14-16		7/8 5/5										SAND
]												SCREEN
16-18	2/2	5/5			CL NA COMP C	GREY, MOIST-WET. M	CONNICTE	e_otier				
	, — — ,	6/6	[1	•	e sand, 15-30% fin		r-airr,		СН		
4										<u> </u>		A
18-20		1/2 3/3	ļ	ļ								
. =												
20-2		3/4										BLANK
	[4/5	[ĺ							ĺ	
22-24	2/2	3/4										
	1 1	3/4										
4												
					END OF BORIN	0 240 FEET				2	L	
\exists					AI BAIME	w satyw jedal						
二 一												ES FORM 2001-3

						SOIL	BOREH	OLE	LOG							
	COME	EST C	ORTLAN				DRILLING METHOD:					BOF		/WE ₩-9	ELL NO.:	T
	0,10,10				7.5	a A	SAMPLING METHOD	:split	SPOON			ŞH	EET_!	0	F _ 2 _	1
					⊗ ∢> 7.5	SHORING	1					ST	DF ART	RILLIN	G FINISH	Z
						RIVER	RIG:		75			TI	ME	\top	TIME	NAHED BROWN
	PRO	PERTY	LINE		6		DRILLING CONTRAC	TOR: CEOS	erve, union, il				NOO ATE		1330 DATE	NAHD
· · · · · · · · · · · · · · · · · · ·				<u></u>	400RING							04/	25/02	(04/25/02	1
JENT:	MET	r han	VČENEN	T_MED	west, by	c	WATER LEVEL:	TIME:	DATE:	CASING	DEPT	H:	ELEV	TOC	97.22	СНЕСКЕВ ВТ
OJECT NO	n · F05	-74-08	-249										1		UND: 95.40	HCK
·			<u>- :</u> -	<u> </u>	T T				1				LENG		ETER: 2"	
FEET	TERV.	ER Y	PER	ACE	TIME.						ပ္		OF S	CREE	N: 5'	
DEPTH IN	SAMPLE NO.	RECOVERY	BLOWS 1	HEADSPACE	SAMPLE		DESCRIPTION				CRAPHIC	nscs	SLOT	SIZE	: 0.01°	
片 년	SAMP S	(Z	8] <u>#</u>	SA								WELL TYPE		STICK UP	
2	•													$\overline{1}$	-PROTECTIVE	
3	r.														CASING RISER	NAON
-		1	Τ'			AUGERED TH	ROUGH FILL TO 3 F	EET BGS.			XXX		1			
						7820211220 (18					\ggg					W BROWN
											\ggg				— CEMENT	9
\exists	3-	1.5/2	1 4/4 5/8								₩]; }
						FILL, SAND A WET-SATURA	nd Gravel, Cinider, Ted.	SLAG, WOOL	CHIPS,		₩					LOGGED B.
	5-	7 0.5/	2 9/6 4/4					÷			\bowtie					9000
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=	7-	9 1/2	7/7 6/8								\ggg			ş		
						-					XX					
	9-	1/2	2/4 8/5								\ggg					
	11-1	3 0/2	*/*								\ggg	:			- BENTONITE	N.
	11-1	9 072	3/3 3/3								\ggg					ES. 17
	13-1	5 0.1/	2 3/3								XXX					RVIC
=		0.2	2 3/3 2/2				_				\ggg					L SE
\exists	15-	7 2/2	1/1	-		CRANES TO	SET AND SAND, 15-3	30% CLAY. F	ACK. WFT.		XX					Y EN
\exists		"	νi			3.223					\ggg					WN
7	17-	9 0/2	3/2								\ggg					VIR
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, 🗐			1/3 2/2			•					₩			$\cdot $		157
\exists	21-2	3 2/2	2/2			GRADES TO	CLAY (CH), GREY, M	XST, <5% F	NE GRAVEL, 15-	30x Silt.	XX				- SEAL	***
		1	3/4												INTERVAL	
=	23-	25 2/2	4/4			CLAY (CH), G	REY, WET, HIGH PLA	STICITY, ST	iff, <5% fine G	RAVEL.		СН		_	— SAND	
	I	· •	6/8	I	1 1					į.			1 I: E		-screen	1

SITE NAME:	CONTINUO	WEST	SOO WEST CORTLAND AVE., CHCAGO, L	8	VE. Ω		SHEET_2_OF_	N	BORIN	RING/WELL NO.:
DEPTH IN FEET		RECOVERY	BLOWS PER 0.5 FT	0.5 FT HEADSPACE	SAMPLE TIME.		OESCRIPTION	GRAPHIC	USCS	(CONTINUED)
	-	-	_ -			$-\parallel$	SAT (NAH), GREY, WET, 45% CLAY.			
%	12 12 73 15	25-27 0.1 27-28 0	0.1/2 12/12 12/12 12/12 12/12 12/12	। हेह			CLAY (CH), GREY, WET, VERY STFF, 15-30% FINE GRAVEL.		9	
		•		-		m	END OF BORANG 28.0 FEET		-	
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	ANNO INC	v-0-000	**************************************	(ATT) (1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1			SOIL	BOREH	HOLE	LOG			- Tooks - Com-	A A A A A A A A A A A A A A A A A A A			
l								DRILLING METHOD): HOL	LOW_STEM_AU	GER		во	RING/		LL NO.:	
LOCATION			ST CO:	rtlani Ks V) AVE		- T	DRILLING FLUID: _				i	SH	EET_1	OF	1] ; ;
^ *				X	1		BULDING	-							LING		
					1)1						ſ		ART ME		FINISH TIME	N.MO
ŀ	Ø -		70'		, "			RIG:						730		0930	NAHED BROWN
														ATE 25/02	1	OATE /25/02	
CLIENT: _	<u>M</u>	ETAL	MANA	GEMEN	T MAD	West, P	ю.	WATER LEVEL:	TIME:	DATE:	CASING	ОЕРТН		ELEV.	TOC:	99,92	CKED BY:
	_	=						!						1		ND: 97.42 '	CHECKED FILE NAME
PROJECT	NO.: _ E		4-06-	249		 1								LENG	ſН	TER: 2"	ο σ
FEET	Š.	INTERVAL	RY	PER F I	ij	TIME.	•					ι _υ		OF SCREE	CREEN IN		
<u>≅</u> F	SAMPLE	E N	RECOVERY	WS P	HE ADSPACE	7 1		DESCRIPTION				CRAPHIC	USCS	SLOT WELL	SIZE:	0.01	
рертн	SA	SAMPLE	RE	BLOWS 0.5 I	¥	SAMPLE					·	ָ טֹ		TYPE		STICK UP	, , , , , , , , , , , , , , , , , , ,
+2	٠.													F	-		FRANK
		•							••							protective Casing	. ⊑
۵ =				;					:			<u>'তিত্ত</u>	4	, []	廿	RISER	DETHANY
							AUGERED THE	ROUGH FILL TO 3	FEET BGS.			\otimes					HED BROWN BY: BET
2	{						and a sharehing	and American Institut	~ 40 ~ 10	ur la rry		\otimes				CEMENT	P
		3-5	2/2	8/20			FEL, SAMO A	WED GRAVEL WITH	SLAG, BLAC	X, WEI.		\otimes					m _
4 —				6/7								\bowtie					LOGGED B'
		5-7	0.1/2									\gg					LOG
6 —				4/4												BENTONITE	
\equiv		7-9	2/2	10/7													
8				7/5			SELTY CLAY	(CL), BROWN-GREY	r, Mottled,	, Moist, Stiff,							
_		9-11	1.8/2	7/7 8/8			15-30% MEDI	um-coarse sand,	5-10% FINE	GRAVEL.			CL	-	Н		
ю —		•		0,0												SEAL Interval	INC.
=	1	11-13	2/2	7/7							1						CPI ENVIRONMENTAL SERVICES, INC. 799 ROOSEVELT RD, BLDG, 4, STE, 110
12				"												•	SERV LDG.
_	1	13-15	2/2	7/6 7/8			GRADES TO	CLAY (CH), GREY,	MOIST, 5-10	X FINE CRAVEL	••]		AL RD. B
14 _				"											31		LT.
=	1	5-17	0.1/2	8/5 5/5												SCREEN	RON
165				3/3												•	ROOT
	1	17-19	1/2	5/8 5/5									C 4		∄╬	SAND	CPI
18 -							CLAY (CH), (Grey, Wet, Stiff, H	NGH PLAST	Kity, (5% Fine	GRAVEL.		СН				3
크		19-21	2/2	6/6 3/4													
20 —																	
	2	21-23	2/2														
22																	
			<u> </u>	11			END OF BORK	₩ 23.0 FEET	<u></u>			<i>VIIIII</i>	1			BLANK	

APPENDIX B

SLUG TEST DATA INTERPRETATION

Slug Test Raw Data: MW-9 Well Stabilization Pre-test

Well Opened: 14:10

Test Conducted by Bethany Frank (CPI Environmental Services, Inc.)

In-Situ Inc. MiniTroll Pro

Report generated:

05/15/02

18:16:59

Report from file:

C:\WIN-SITU\Data\SN05986 2002-05-15 170555

Test #1.bin

DataMgr Version 3.70

Serial number: 00005986

Firmware Version

3.03

Unit name:

Test name:

Test #1

Test defined on: 05/15/02 17:05:50 Test started on: 05/15/02 17:05:55 05/15/02 Test stopped on: 18:05:00

Test extracted on: N/A

Data gathered using Linear testing

Time between data points: 1.0000 Minutes.

Number of data samples: 60

TOTAL DATA SAMPLES 60

Channel number [2]

Measurement type: Pressure

Channel name:

Density:

Sensor Range: 30 PSI.

Latitude: 0 degrees

Elevation: 274.320 meters (900.000 feet)

Mode: Surface

User-defined reference: Feet H2O 12.436

Referenced on: test start

Pressure head at reference: 16.797 Feet H2O

 $1.000 \, \text{g/cm}^3$

Chan[2]

	Chan	[2]	
Date	Time	ET (min)	Feet H2O
05/15/02	17:05:55	0.0000	12.436
05/15/02	17:06:55	1.0000	12.438
05/15/02	17:07:55	2.0000	12.436
05/15/02	17:08:55	3.0000	12.430
05/15/02	17:09:55	4.0000	12.430
05/15/02	17:10:55	5.0000	12.431
05/15/02	17:11:55	6.0000	12.423
05/15/02	17:12:55	7.0000	12.421
05/15/02	17:13:55	8.0000	12.419
05/15/02	17:14:55	9.0000	12.412
05/15/02	17:15:55	10.0000	12.412
05/15/02	17:16:55	11.0000	12.411
05/15/02	17:17:55	12.0000	12.407
05/15/02	17:18:55	13.0000	12.403
05/15/02	17:19:55	14.0000	12.401
05/15/02	17:20:55	15.0000	12.401
05/15/02	17:21:55	16.0000	12.399
05/15/02	17:22:55	17.0000	12.397
05/15/02	17:23:55	18.0000	12.397
05/15/02	17:24:55	19.0000	12.391
05/15/02	17:25:55	20.0000	12.391
05/15/02	17:26:55	21.0000	12.387
05/15/02	17:27:55	22.0000	12.381
05/15/02	17:28:55	23.0000	12.379
05/15/02	17:29:55	24.0000	12.373
05/15/02	17:30:55	25.0000	12.382
05/15/02	17:31:55	26.0000	12.373
05/15/02	17:32:55	27.0000	12.376
05/15/02	17:33:55	28.0000	12.372
05/15/02	17:34:55	29.0000	12.374
05/15/02	17:35:55	30.0000	12.368
05/15/02	17:36:55	31.0000	12.369
05/15/02	17:37:55	32.0000	12.366
05/15/02	17:38:55	33.0000	12.366
05/15/02	17:39:55	34.0000	12.366
05/15/02	17:40:55	35.0000	12.364
05/15/02	17:41:55	36.0000	12.363
05/15/02	17:42:55	37.0000	12.363
05/15/02	17:43:55	38.0000	12.358

05/15/02	17:44:55	39.0000	12.358
05/15/02	17:45:55	40.0000	12.356
05/15/02	17:46:55	41.0000	-12.358
05/15/02	17:47:55	42.0000	12.356
05/15/02	17:48:55	43.0000	12.352
05/15/02	17:49:55	44.0000	12.354
05/15/02	17:50:55	45.0000	12.354
05/15/02	17:51:55	46.0000	12.352
05/15/02	17:52:55	47.0000	12.352
05/15/02	17:53:55	48.0000	12.350
05/15/02	17:54:55	49.0000	12.348
05/15/02	17:55:55	50.0000	12.348
05/15/02	17:56:55	51.0000	12.348
05/15/02	17:57:55	52.0000	12.346
05/15/02	17:58:55	53.0000	12.348
05/15/02	17:59:55	54.0000	12.346
05/15/02	18:00:55	55.0000	12.344
05/15/02	18:01:55	56.0000	12.344
05/15/02	18:02:55	57.0000	12.342
05/15/02	18:03:55	58.0000	12.340
05/15/02	18:04:55	59.0000	12.338

MW9 - Falling Head

Slug Test Raw Data: MW-9 Slug Injection (Falling Head)

Well Opened: 14:10

Test Conducted by Bethany Frank (CPI Environmental Services, Inc.)

In-Situ Inc. MiniTroll Pro

Report generated:

05/15/02

18:58:12

Report from file:

C:\WIN-SITU\Data\SN05986 2002-05-15 180927

Test #7.bin

DataMgr Version 3.70

Serial number: 00005986

Firmware Version

3.03

Unit name:

Test name:

Test #7

Test defined on: Test started on: Test stopped on: 05/15/02 18:07:15 05/15/02 18:09:27 .

05/15/02

18:57:55

Test extracted on:

N/A

Data gathered using Logarithmic testing

Maximum time between data points:

1.0000

Minutes.

Number of data samples:

TOTAL DATA SAMPLES

Channel number [2]

Measurement type:

Pressure

Channel name:

Sensor Range: 30 PSI.

Density:

1.000 g/cm

Latitude:

0 degrees

Elevation:

274.320 meters (900.000 feet)

Mode: Surface

User-defined reference:

16.699

Feet H2O

Referenced on:

test start

Pressure head at reference:

16.695

Feet H2O

Chan	[2]
CHan	

Date	Time	ET (min)	Feet H2O
05/15/02	18:09:27	0.0000	16.699
05/15/02	18:09:27	0.0050	16.721
05/15/02	18:09:28	0.0100	16.730
05/15/02	18:09:28	0.0150	16.738
05/15/02	18:09:28	0.0200	16.742
05/15/02	18:09:29	0.0250	16.746
05/15/02	18:09:29	0.0300	16.746
05/15/02	18:09:29	0.0350	16.750
05/15/02	18:09:29	0.0400	16.750
05/15/02	18:09:30	0.0450	16.750
05/15/02	18:09:30	0.0500	16.753
05/15/02	18:09:30	0.0550	16.755
05/15/02	18:09:31	0.0600	16.755
05/15/02	18:09:31	0.0650	16.754
05/15/02	18:09:31	0.0700	16.754
05/15/02	18:09:32	0.0750	16.752
05/15/02	18:09:32	0.0800	16.754
05/15/02	18:09:32	0.0848	16.754
05/15/02	18:09:32	0.0900	16.754
05/15/02	18:09:33	0.0950	16.752
05/15/02	18:09:33	0.1000	16.754
05/15/02	18:09:33	0.1058	16.759
05/15/02	18:09:34	0.1120	16.765
05/15/02	18:09:34	0.1185	16.769
05/15/02	18:09:35	0.1255	16.771
05/15/02	18:09:35	0.1328	18.806
05/15/02	18:09:35	0.1407	18.107
05/15/02	18:09:36	0.1490	18.701
05/15/02	18:09:36	0.1578	18.661
05/15/02	18:09:37	0.1670	18.212
05/15/02	18:09:38	0.1770	17.723
05/15/02	18:09:38	0.1875	18.147
05/15/02	18:09:39	0.1985	17.964
05/15/02	18:09:40	0.2102	18.021
05/15/02	18:09:40	0.2227	18.002
05/15/02	18:09:41	0.2358	18.023
05/15/02	18:09:42	0.2498	18.000
05/15/02	18:09:43	0.2647	17.998
05/15/02	18:09:44	0.2803	17.996

05/15/02	18:09:45	0.2970	17.996
05/15/02	18:09:46	0.3147	17.992
05/15/02	18:09:47	0.3333	17.992
05/15/02	18:09:48	0.3532	17.986
05/15/02	18:09:49	0.3742	17.984
05/15/02	18:09:51	0.3963	17.988
05/15/02	18:09:52	0.4198	17.984
05/15/02	18:09:54	0.4447	17.977
05/15/02	18:09:55	0.4697	17.977
05/15/02	18:09:57	0.4963	17.977
05/15/02	18:09:58	0.5247	18.080
05/15/02	18:10:00	0.5547	17.963
05/15/02	18:10:02	0.5863	17.971
05/15/02	18:10:04	0.6213	17.969
05/15/02	18:10:06	0.6578	17.967
05/15/02	18:10:09	0.6963	17.963
05/15/02	18:10:11	0.7380	17.960
05/15/02	18:10:14	0.7813	17.960
05/15/02	18:10:17	0.8280	17.958
05/15/02	18:10:20	0.8763	17.954
05/15/02	18:10:23	0.9280	17.950
05/15/02	18:10:26	0.9830	17.950
05/15/02	18:10:29	1.0413	17.944
05/15/02	18:10:33	1.1030	17.942
05/15/02	18:10:37	1.1680	17.942
05/15/02	18:10:41	1.2380	17.938
05/15/02	18:10:46	1.3113	17.936
05/15/02	18:10:50	1.3897	17.931
05/15/02	18:10:55	1.4730	17.925
05/15/02	18:11:01	1.5613	17.921
05/15/02	18:11:06	1.6547	17.919
05/15/02	18:11:12	1.7530	17. 915
05/15/02	18:11:18	1.8580	17.913
05/15/02	18:11:25	1.9680	17.909
05/15/02	18:11:32	2.0847	17.902
05/15/02	18:11:40	2.2097	17.890
05/15/02	18:11:47	2.3412	17.894
05/15/02	18:11:56	2.4813	17.888
05/15/02	18:12:05	2.6297	17.883
05/15/02	18:12:14	2.7863	17.875
05/15/02	18:12:24	2.9530	17.869
05/15/02	18:12:35	3.1297	17.863
05/15/02	18:12:46	3.3163	17.859

05/15/02	18:12:58	3.5147	17.852
05/15/02	18:13:10	3.7247	17.844
05/15/02	18:13:24	3.9463	17.838
05/15/02	18:13:38	4.1813	17.829
05/15/02	18:13:53	4.4295	17.823
05/15/02	18:14:09	4.6930	17.814
05/15/02	18:14:25	4.9730	17.800
05/15/02	18:14:43	5.2697	17.793
05/15/02	18:15:02	5.5830	17.785
05/15/02	18:15:22	5.9147	17.779
05/15/02	18:15:43	6.2663	17.766
05/15/02	18:16:05	6.6397	17.754
05/15/02	18:16:29	7.0347	17.745
05/15/02	18:16:54	7.4530	17.733
05/15/02	18:17:21	7.8963	17.723
05/15/02	18:17:49	8.3663	17.708
05/15/02	18:18:19	8.8647	17.698
05/15/02	18:18:50	9.3913	17.683
05/15/02	18:19:24	9.9497	17.673
05/15/02	18:19:59	10.5413	17.660
05/15/02	18:20:37	11.1680	17.645
05/15/02	18:21:17	11.8313	17.633
05/15/02	18:21:59	12.5347	17.618
05/15/02	18:22:44	13.2797	17.599
05/15/02	18:23:31	14.0697	17.589
05/15/02	18:24:21	14.9063	17.570
05/15/02	18:25:14	15.7913	17.551
05/15/02	18:26:11	16.7297	17.538
05/15/02	18:27:10	17.7230	17.521
05/15/02	18:28:14	18.7763	17.507
05/15/02	18:29:14	19.7763	17.486
05/15/02	18:30:14	20.7763	17.471
05/15/02	18:31:14	21.7763	17.463
05/15/02	18:32:14	22.7763	17.448
05/15/02	18:33:14	23.7763	17.435
05/15/02	18:34:14	24.7763	17.423
05/15/02	18:35:14	25.77.63	17.412
05/15/02	18:36:14	26.7763	17.400
05/15/02	18:37:14	27.7763	17.381
05/15/02	18:38:14	28.7763	17.377
05/15/02	18:39:14	29.7763	17.368
05/15/02	18:40:14	30.7763	17.353
05/15/02	18:41:14	31.7763	17.347

05/15/02	18:42:14	32.7763	17.337
05/15/02	18:43:14	33.7763	17.328
05/15/02	18:44:14	34.7763	17.318
05/15/02	18:45:14	35.7763	17.303
05/15/02	18:46:14	36.7763	17.301
05/15/02	18:47:14	37.7763	17.293
05/15/02	18:48:14	38.7763	17.282
05/15/02	18:49:14	39.7763	17.276
05/15/02	18:50:14	40.7763	17.263
05/15/02	18:51:14	41.7763	17.259
05/15/02	18:52:14	42.7763	17.251
05/15/02	18:53:14	43.7763	17.240
05/15/02	18:54:14	44.7763	17.234
05/15/02	18:55:14	45.7763	17.227
05/15/02	18:56:14	46.7763	17.223
05/15/02	18:57:14	47.7763	17.215

Slug Test - Falling Head

Site Name:

Cometco Facility

Location:

Chicago, Illinois

Test Date:

May 15, 2002

Client:

Metal Management Midwest, Inc.

Project Number:

E05-74-12-294

Import File: the end property that the contract of the particular C:\My Documents\PROJECTS\MTLM Midwest\Cometco SRP\groundwater investigation\slug

Well Label: Aquifer Thickness:

40. feet

Screen Length:

5. feet

Casing Radius:

8.33e-002 feet

Effective Radius:

0.344 feet

Gravel Pack Porosity:

30. %

Corrected Casing Radius:

0.2009 feet

Static Water Level:

Water Table to Screen Bottom:

16.7 feet

Anisotropy Ratio:

20. feet

10.

Time Adjustment:

7.968 Seconds

Test starts with trial 25

There are 141 time and drawdown measurements

Maximum head is 2.106 feet Minimum head is -1.e-003 feet

Trial	Time	Adjusted Time	Drawdown	Head	Head Ratio
	(minutes)	(minutes)	(feet)	(feet)	
1	0.	-0.1328	16.7	-1.e-003	-4.748e-004
2	5.e-003	-0.1278	16.72	2.1e-002	9.972e-003
3	1.e-002	-0.1228	16.73	3.e-002	1.425e-002
4	1.5e-002	- 0.1178	16.74	3.8e-002	1.804e-002
5	2.e-002	-0.1128	16.74	4.2e-002	1.994e-002
6	2.5e-002	-0.1078	16.75	4.6e-002	2.184e-002
7	3.e-002	-0.1028	16.75	4.6e-002	2.184e-002
8	3.5e-002	-9.78e-002	16.75	5.e-002	2.374e-002
9	4.e-002	-9.28e-002	16.75	5.e-002	2.374e-002
10	4.5e-002	-8.78e-002	16.75	5.e-002	2.374e-002
11	5.e-002	-8.28e-002	16.75	5.3e-002	2.517e-002
12	5.5e-002	-7.78e-002	16.75	5.5e-002	2.612e-002
13	6.e-002	-7.28e-002	16.75	5.5e-002	2.612e-002
14	6.5e-002	-6.78e-002	16.75	5.4e-002	2.564e-002
15	7.e-002	-6.28e-002	16.75	5.4e-002	2.564e-002
16	7.5e-002	-5.78e-002	16.75	5.2e-002	2.469e-002
17	8.e-002	-5.28e-002	16.75	5.4e-002	2.564e-002
18	8.48e-002	-4.8e-002	16.75	5.4e-002	2.564e-002
19	9.e-002	-4.28e-002	16.75	5.4e-002	2.564e-002
20	9.5e-002	-3.78e-002	16.75	5.2e-002	2.469e-002
21	0.1	-3.28e-002	16.75	5.4e-002	2.564e-002
22	0.1058	-2.7e-002	16.76	5.9e - 002	2.802e-002
23	0.112	-2.08e-002	16.77	6.5e-002	3.086e-002
24	0.1185	-1.43e-002	16.77	6.9e-002	3.276e-002
25	0.1255	-7.3e-003	16.77	7.1e-002	3.371e-002
26	0.1328	0.	18.81	2.106	1.
27	0.1407	7.9e-003	18.11	1.407	0.6681
28	0.149	1.62e-002	18.7	2.001	0.9501
29	0.1578	2.5e-002	18.66	1.961	0.9311
30	0.167	3.42e-002	18.21	1.512	0.7179
31	0.177	4.42e-002	17.72	1.023	0.4858

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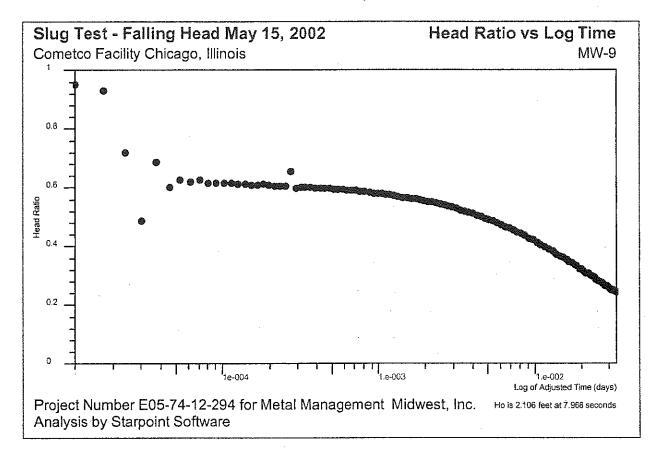
32 33	0.1875 0.1985	5.47e-002 6.57e-002	18.15 17.96	1.447 1.264	0.6871 0.6002
34	0.2102	7.74e-002	18.02	1.321	0.6273
35	0.2227	8.99e-002	18.	1.302	0.6182
36	0.2358	0.103	18.02	1.323	0.6282
37	0.2498	0.117	18.	1.3	0.6173
38	0.2647	0.1319	18.	1.298	0.6163
39	0.2803	0.1475	18.	1.296	0.6154
40	0.297	0.1642	18.	1.296	0.6154
41	0.3147	0.1819	17.99	1.292	
42	0.3333	0.2005	17.99	1.292	0.6135
43	0.3532	0.2204	17.99	1.286	0.6135
44	0.3742	0.2414	17.98	1.284	0.6106
45	0.3963	0.2635	17.99	1.288	0.6097
46	0.4198	0.287			0.6116
47	0.4447	0.3119	17.98	1.284	0.6097
48	0.4697	0.3369	17.98	1.277	0.6064
49	0.4963		17.98	1.277	0.6064
50	0.5247	0.3635	17.98	1.277	0.6064
51	0.5547	0.3919	18.08	1.38	0.6553
52		0.4219	17.96	1.263	0.5997
53	0.5863	0.4535	17.97	1.271	0.6035
	0.6213	0.4885	17.97	1.269	0.6026
54 55	0.6578 0.6963	0.525	17.97	1.267	0.6016
			17.96	1.263	0.5997
56	0.738	0.6052	17.96	1.26	0.5983
57	0.7813	0.6485	17.96	1.26	0.5983
58	0.828	0.6952	17.96	1.258	0.5973
59	0.8763	0.7435	17.95	1.254	0.5954
60	0.928	0.7952	17.95	1.25	0.5935
61	0.983	0.8502	17.95	1.25	0.5935
62	1.041	0.9085	17.94	1.244	0.5907
63	1.103	0.9702	17.94	1.242	0.5897
64	1.168	1.035	17.94	1.242	0.5897
65	1.238	1.105	17.94	1.238	0.5878
66	1.311	1.178	17.94	1.236	0.5869
67	1.39	1.257	17.93	1.231	0.5845
68	1.473	1.34	17.93	1.225	0.5817
69	1.561	1.428	17.92	1.221	0.5798
70	1.655	1.522	17.92	1.219	0.5788
71	1.753	1.62	17.91	1.215	0.5769
72	1.858	1.725	17.91	1.213	0.576
73	1.968	1.835	17.91	1.209	0.5741
74	2.085	1.952	17.9	1.202	0.5708
75 70	2.21	2.077	17.89	1.19	0.5651
76	2.341	2.208	17.89	1.194	0.567
77	2.481	2.349	17.89	1.188	0.5641
78	2.63	2.497	17.88	1.183	0.5617
79	2.786	2.654	17.88	1.175	0.5579
80	2.953		17.87	1.169	0.5551
81 .	3.13	2.997	17.86	1.163	0.5522
82	3.316	3.184	17.86	1.159	0.5503
83	3.515	3.382	17.85	1.152	0.547
84	3.725	3.592	17.84	1.144	0.5432
85	3.946	3.813	17.84	1.138	0.5404
86	4.181	4.048	17.83	1.129	0.5361
87	4.43	4.297	17.82	1.123	0.5332
88 .	4.693	4.56	17.81	1.114	0.529

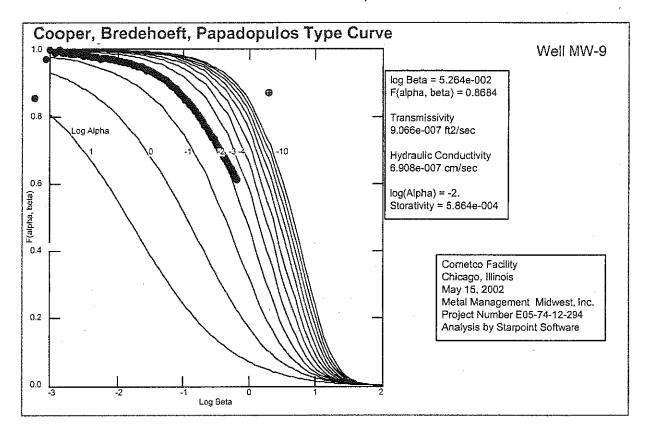
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0.0	4.070	4.0.4	47.0	4.4	0.5000
89	4.973	4.84	17.8	1.1	0.5223
90	5.27	5.137	17.79	1.093	0.519
91	5.583	5.45	17.79	1.085	0.5152
92	5.915	5.782	17.78	1.079	0.5123
93	6.266	6.134	17.77	1.066	0.5062
94	6.64	6.507	17.75	1.054	0.5005
95	7.035	6.902	17.75	1.045	0.4962
96	7.453	7.32	17.73	1.033	0.4905
97	7.896	7.764	17.72	1.023	0.4858
98	8.366	8.234	17.71	1.008	0.4786
99	8.865	8.732	17.7	0.998	0.4739
100	9.391	9.258	17.68	0.983	0.4668
101	9.95	9.817	17.67	0.973	0.462
102	10.54	10.41	17.66	0.96	0.4558
103	11.17	11.04	17.65	0.945	0.4487
104	11.83	11.7	17.63	0.933	0.443
105	12.53	12.4	17.62	0.918	0.4359
106	13.28	13.15	17.6	0.899	0.4269
107	14.07	13.94	17.59	0.889	0.4221
108	14.91	14.77	17.57	0,87	0.4131
109	15.79	15.66	17.55	0.851	0.4041
110	16.73	16.6	17.54	0.838	0.3979
111	17.72	17.59	17.52	0.821	0.3898
112	18.78	18.64	17.51	0.807	0.3832
113	19.78	19.64	17.49	0.786	0.3732
114	20.78	20.64	17.47	0.771	0.3661
115	21.78	21.64	17.46	0.763	0.3623
116	22.78	22.64	17.45	0.748	0.3552
117	23.78	23.64	17.43	0.735	0.349
118	24.78	24.64	17.42	0.723	0.3433
119	25.78	25.64	17.41	0.712	0.3381
120	26.78	26.64	17.4	0.7	0.3324
121	27.78	27.64	17.38	0.681	0.3234
122	28.78	28.64	17.38	0.677	0.3215
123	29.78	29.64	17.37	0.668	0.3172
124	30.78	30.64	17.35	0.653	0.3101
125	31.78	31.64	17.35	0.647	0.3072
126	32.78	32.64	17.34	0.637	0.3025
127	33.78	33.64	17.33	0.628	0.3023
	0.4.70			0.618	0.2934
128	34.78	34.64	17.32 17.3	0.603	0.2863
129	35.78	35.64			
130	36.78	36.64	17.3	0.601	0.2854
131	37.78	37.64	17.29	0.593	0.2816
132	38.78	38.64	17.28	0.582	0.2764
133	39.78	39.64	17.28	0.576	0.2735
134	40.78	40.64	17.26	0.563	0.2673
135	41.78	41.64	17.26	0.559	0.2654
136	42.78	42.64	17.25	0.551	0.2616
137	43.78	43.64	17.24	0.54	0.2564
138	44.78	44.64	17.23	0.534	0.2536
139	45.78	45.64	17.23	0.527	0.2502
140	46.78	46.64	17.22	0.523	0.2483
141	47.78	47.64	17.22	0.515	0.2445

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MW10 - Falling Head

Slug Test Raw Data: MW-10 Slug Injection (Falling Head)

Well Opened: 08:00

Test Conducted by Bethany Frank (CPI Environmental Services, Inc.)

In-Situ Inc. MiniTroll Pro

Report generated: 05/14/02 14:43:59

Report from file: C:\WIN-SITU\Data\SN05986 2002-05-14 110337

Test #4.bin

DataMgr Version 3.70

Serial number: 00005986

Firmware Version 3.03

Unit name:

Test name: Test #4

Test defined on: 05/14/02 11:03:30
Test started on: 05/14/02 11:03:37
Test stopped on: 05/14/02 11:59:21

Test extracted on: N/A

Data gathered using Logarithmic testing

Maximum time between data points: 10.0000 Minutes.

Number of data samples: 130

TOTAL DATA SAMPLES 130

Channel number [1]

Measurement type: Temperature

Channel name:

Channel number [2]

Measurement type: Pressure

Channel name:

Sensor Range: 30 PSI.

Density: 1.000 g/cm3

Latitude: 0 degrees

Elevation: 274.320 meters (900.000 feet)

Mode: Surface

User-defined reference: 19.780 Feet H20

Referenced on: test start

Pressure head at reference: 16.990 Feet H20

	Chan	[1] Chan[2]	•	
Date t H2O	Time	ET (min)	Fahrenheit	Fee
	·			
05/14/02 19.780	11:03:37	0.0000	53.34	
05/14/02 20.510	11:03:37	0.0050	53.38	
05/14/02 21.350	11:03:37	0.0100	53.41	
05/14/02 21.497	11:03:38	0.0150	53.41	
05/14/02 21.320	11:03:38	0.0200	53.41	
05/14/02 21.255	11:03:38	0.0250	53.41	
05/14/02 21.427	11:03:39	0.0300	53.43	
05/14/02 21.562	11:03:39	0.0350	53.43	
05/14/02 21.545	11:03:39	0.0400	53.43	*
05/14/02 21.434	11:03:40	0.0450	53.43	
05/14/02 21.316	11:03:40	0.0500	53.43	
05/14/02 20.629	11:03:40	0.0550	53.43	
05/14/02 20.232	11:03:40	0.0600	53.43	
05/14/02 20.621	11:03:41	0.0650	53.43	
05/14/02 21.123	11:03:41	0.0700	53.43	
05/14/02 21.102	11:03:41	0.0750	53.43	

05/14/02	11:03:42	0.0800	53.43
05/14/02	11:03:42	0.0848	53.43
20.558 05/14/02	11:03:42	0.0900	53.43
20.699 05/14/02	11:03:43	0.0950	53.45
20.912 05/14/02	11:03:43	0.1000	53.43
20.934 05/14/02	11:03:43	0.1058	53.45
20.770 05/14/02	11:03:44	0.1120	53.45
20.702 05/14/02	11:03:44	0.1185	53.45
20.812 05/14/02	11:03:44	0.1255	53.45
20.854 05/14/02	11:03:45	0.1328	53.45
20.772 05/14/02	11:03:45	0.1407	53.45
20.774 05/14/02	11:03:46	0.1490	53.45
20.822 05/14/02	11:03:46	0.1578	53.45
20.786 05/14/02	11:03:47	0.1670	53.41
20.777 05/14/02	11:03:47	0.1770	53.41
20.785 05/14/02	11:03:48	0.1875	53.41
20.766 05/14/02	11:03:49	0.1985	53.41
20.774 05/14/02	11:03:49	0.2102	53.41
20.766 05/14/02	11:03:50	0.2227	53.41
20.766 05/14/02	11:03:51	0.2358	53.41
20.762 05/14/02	11:03:52	0.2498	53.41
20.762 05/14/02	11:03:53	0.2647	53.41

00 50			
20.760 05/14/02	11:03:54	0.2803	53.41
20.758			
05/14/02 20.756	11:03:55	0.2970	53.41
	41.02.56	0 2147	E0 41
05/14/02	11:03:56	0.3147	53.41
20.753	11:03:57	0.3333	ED 41
05/14/02 20.753	11:03:57	0.3333	53.41
05/14/02	11:03:58	0.3532	53.41
20.749	11.05.56	0.3332	23.41
05/14/02	11:03:59	0.3742	53.41
20.749	11.00.00	0.3742	55.41
05/14/02	11:04:01	0.3963	53.41
20.747		0.3300	20.11
05/14/02	11:04:02	0.4198	53.41
20.745			,
05/14/02	11:04:03	0.4447	53.41
20.743			
05/14/02	11:04:05	0.4697	53.41
20.743			
05/14/02	11:04:07	0.4963	53.41
20.743			
05/14/02	11:04:08	0.5247	53.41
20.741			
05/14/02	11:04:10	0.5547	53.41
20.739			
05/14/02	11:04:12	0.5863	53.41
20.737			
05/14/02	11:04:14	0.6213	53.41
20.735	77 04 76	0.6550	F2 41
05/14/02	11:04:16	0.6578	53.41
20.735	71.04.10	0 6063	ED 41
05/14/02 20.732	11:04:19	0.6963	53.41
05/14/02	11:04:21	0.7380	53.41
20.730	11.04.21	0.7300	JJ.41
05/14/02	11:04:24	0.7813	53.41
20.728	<u> </u>	2., 322	_ ~ , ,
05/14/02	11:04:26	0.8280	53.41
20.726		-	
05/14/02	11:04:29	0.8763	53.41
20.724			

05/14/02 20.722	11:04:32	0.9280	53.41
05/14/02 20.720	11:04:36	0.9830	53.41
05/14/02 20.720	11:04:39	1.0413	53.41
05/14/02 20.718	11:04:43	1.1030	53.41
05/14/02 20.714	11:04:47	1.1680	53.41
05/14/02 20.711	11:04:51	1.2380	53.41
05/14/02 20.711	11:04:55	1.3113	53.41
05/14/02 20.707	11:05:00	1.3897	53.41
05/14/02 20.705	11:05:05	1.4730	53.41
05/14/02 20.703	11:05:10	1.5613	53.41
05/14/02 20.699	11:05:16	1.6547	53.41
05/14/02 20.697	11:05:22	1.7530	53.41
05/14/02 20.695	11:05:28	1.8580	53.41
05/14/02 20.688	11:05:35	1.9680	53.41
05/14/02 20.686	11:05:42	2.0847	53.41
05/14/02 20.684	11:05:49	2.2097	53.38
05/14/02 20.680	11:05:57	2.3412	53.38
05/14/02 20.676	11:06:06	2.4813	53.38
05/14/02 20.672	11:06:15	2.6297	53.38
05/14/02 20.670	11:06:24	2.7863	53.38
05/14/02 20.664	11:06:34	2.9530	53.36
05/14/02	11:06:45	3.1297	53.36

20.662			
05/14/02	11:06:56	3.3163	53.36
20.655			
05/14/02	11:07:08	3.5147	53.36
20.651			
05/14/02	11:07:20	3.7247	53.36
20.645			
05/14/02	11:07:34	3.9463	53.38
20.640	11 05 10	4 1012	
05/14/02	11:07:48	4.1813	53.38
20.634 05/14/02	11:08:03	4.4295	53.38
20.628	11:00:03	4.4293	55.50
05/14/02	11:08:18	4.6930	53.38
20.621		270200	
05/14/02	11:08:35	4.9730	53.38
20.615		. •	
05/14/02	11:08:53	5.2697	53.38
20.611			
05/14/02	11:09:12	5.5830	53.38
20.603			
05/14/02	11:09:32	5.9147	53.38
20.596	11 00 52	C 2662	
05/14/02 20.588	11:09:53	6.2663	53.41
05/14/02	11:10:15	6.6397	53.41
20.581	11.10.13	0.0357	55.41
05/14/02	11:10:39	7.0347	53.41
20.571			
05/14/02	11:11:04	7.4530	53.41
20.562			•
05/14/02	11:11:31	7.8963	53.38
20.554		•	
05/14/02	11:11:59	8.3663	53.38
20.544	11 10 00	0.0645	F2 20
05/14/02 20.533	11:12:29	8.8647	53.38
05/14/02	11:13:00	9.3913	53.36
20.525	11.13.00	J.J.J.	22.30
05/14/02	11:13:34	9.9497	53.36
20.513	· · - ·		-
05/14/02	11:14:09	10.5413	53.34
20.502			

05/14/02	11:14:47	11.1680	53.31
20.490 05/14/02	11:15:27	11.8313	53.27
20.478	11:15:27	11.0313	55.27
05/14/02	11:16:09	12.5347	53.27
20.466			33.2.
05/14/02	11:16:54	13.2797	53.27
20.455			
05/14/02	11:17:41	14.0697	53.27
20.440			
05/14/02	11:18:31	14.9063	53.25
20.428			
05/14/02	11:19:24	15.7913	53.25
20.414			
05/14/02	11:20:21	16.7297	53.22
20.399 05/14/02	11:21:20	17.7230	53.20
20.383	11:21:20	17.7230	55.20
05/14/02	11:22:23	18.7763	53.13
20.365			23.23
05/14/02	11:23:30	19.8913	53.13
20.352			4
05/14/02	11:24:41	21.0730	53.13
20.333			
05/14/02	11:25:56	22.3247	53.15
20.318			•
05/14/02	11:27:16	23.6497	53.18
20.301	11 00 40	25 0547	5 7 20
05/14/02 20.282	11:28:40	25.0547	53.20
05/14/02	11:30:09	26.5430	53.15
20.262	11.50.05	20.5450	33.13
05/14/02	11:31:44	28.1180	53.13
20.243			
05/14/02	11:33:24	29.7863	53.20
20.225			
05/14/02	11:35:10	31.5547	53.22
20.206			
05/14/02	11:37:02	33.4280	53.18
20.188	44 20 04	S- 4450	E2 22
05/14/02	11:39:01	35.4112	53.20
20.166 05/14/02	11 - 41 . 00	37.5130	E2 25
03/14/02	11:41:08	3/.3L3V	53.25

20.147			
05/14/02	11:43:21	39.7397	53.31
20.125			
05/14/02	11:45:43	42.0980	53.29
20.104			
05/14/02	11:48:13	44.5963	53.20
20.082			
05/14/02	11:50:51	47.2430	53.27
20.060			
05/14/02	11:53:40	50.0463	53.27
20.039	·	•	
05/14/02	11:56:38	53.0147	53.25
20.017		-	

Slug Test - Falling Head

Site Name:

Cometco Facility

Location: Test Date:

Chicago, Illinois May 14, 2002

Client:

Metal Management Midwest, Inc.

Project Number:

E05-74-12-294

Import File:

C:\My Documents\PROJECTS\MTLM Midwest\Cometco SRP\groundwater investigation\slug tes

Well Label:

MW-10

Aquifer Thickness:

30. feet

Screen Length:

10. feet

Casing Radius: Effective Radius: 8.33e-002 feet

0.354 feet

Static Water Level:

19.78 feet

Water Table to Screen Bottom: 20, feet

Anisotropy Ratio:

Time Adjustment:

1.

2.1 Seconds

Test starts with trial 7

There are 130 time and drawdown measurements

Maximum head is 1.782 feet

Minimum head is 0, feet

Trial	Time	Adjusted Time	Drawdown	Head	Head Ratio
	(minutes)	(minutes)	(feet)	(feet)	
1	0.	-3.5e-002	19.78	0.	0.
2	5.e-003	-3.e-002	20.51	0.73	0.4097
3	1.e-002	-2.5e-002	21.35	1.57	0.881
4	1.5e-002	-2.e-002	21.5	1.717	0.9635
5	2.e-002	-1.5e-002	21.32	1.54	0.8642
6	2.5e-002	-1.e-002	21.25	1.475	0.8277
7	3.e-002	-5.e-003	21.43	1.647	0.9242
8	3.5e-002	0.	21.56	1.782	1.
9	4.e-002	5.e-003	21.55	1.765	0.9905
10	4.5e-002	1.e-002	21.43	1.654	0.9282
11	5.e-002	1.5e-002	21.32	1.536	0.862
12	5.5e-002	2.e-002	20.63	0.849	0.4764
13	6.e-002	2.5e-002	20.23	0.452	0.2536
14	6.5e-002	3.e-002	20.62	0.841	0.4719
15	7.e-002	3.5e-002	21.12	1.343	0.7536
16	7.5e-002	4.e-002	21.1	1.322	0.7419
17	8.e-002	4.5e-002	20.74	0.958	0.5376
18	8.48e-002	4.98e-002	20.56	0.778	0.4366
19	9.e-002	5.5e-002	20.7	0.919	0.5157
20	9.5e-002	6.e-002	20.91	1.132	0.6352
21	0.1	6.5e-002	20.93	1.154	0.6476
22	0.1058	7.08e-002	20.77	0.99	0.5556
23	0.112	7.7e-002	20.7	0.922	0.5174
24	0.1185	8.35e-002	20.81	1.032	0.5791
25	0.1255	9.05e-002	20.85	1.074	0.6027
26	0.1328	9.78e-002	20.77	0.992	0.5567
27	0.1407	0.1057	20.77	0.994	0.5578
28	0.149	0.114	20.82	1.042	0.5847
29	0.1578	0.1228	20.79	1.006	0.5645
30	0.167	0.132	20.78	0.997	0.5595
31	0.177	0.142	20.79	1.005	0.564
32	0.1875	0.1525	20.77	0.986	0.5533
33	0.1985	0.1635	20.77	0.994	0.5578

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Cometco Facility

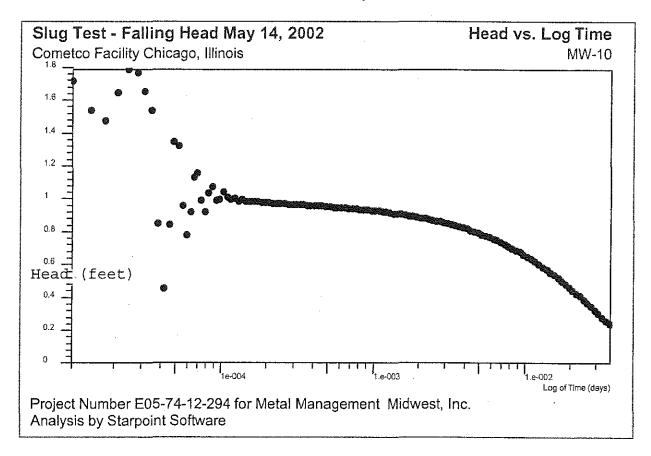
•					
34	0.2102	0.1752	20.77	0.986	0.5533
				0.986	0.5533
35	0.2227	0.1877	20.77		
36	0.2358	0.2008	20.76	0.982	0.5511
37	0.2498	0.2148	20.76	0.982	0.5511
38	0.2647	0.2297	20.76	0.98	0.5499
39	0.2803	0.2453	20.76	0.978	0.5488
40	0.297	0.262	20.76	0.976	0.5477
4 1	0.3147	0.2797	20.75	0.973	0.546
		0.2983	20.75	0.973	0.546
42	0.3333				
43	0.3532	0.3182	20.75	0.969	0.5438
44	0.3742	0.3392	20.75	0.969	0.5438
45	0.3963	0.3613	20.75	0.967	0.5426
			20.75		0.5415
46	0.4198	0.3848		0.965	
47	0.4447	0.4097	20.74	0.963	0.5404
48	0.4697	0.4347	20.74	0.963	0.5404
49	0.4963	0.4613	20.74	0.963	0.5404
50	0.5247	0.4897	20.74	0.961	0.5393
51	0.5547	0.5197	20.74	0.959	0.5382
52	0.5863	0.5513	20.74	0.957	0.537
53	0.6213	0.5863	20.73	0.955	0.5359
54	0.6578	0.6228	20.73	0.955	0.5359
55	0.6963	0.6613	20.73	0.952	0.5342
56	0.738	0.703	20.73	0.95	0.5331
57	0.7813	0.7463	20.73	0.948	0.532
58	0.828	0.793	20.73	0.946	0.5309
59	0.8763	0.8413	20.72	0.944	0.5297
60	0.928	0.893	20.72	0.942	0.5286
61	0.983	0.948	20.72	0.94	0.5275
62	1.041	1.006	20.72	0.94	0.5275
63	1.103	1.068	20.72	0.938	0.5264
64	1.168	1.133	20.71	0.934	0.5241
65	1.238	1.203	20.71	0.931	0.5224
The second secon				and the second s	
66	1.311	1.276	20.71	0.931	0.5224
67	1.39	1.355	20.71	0.927	0.5202
68	1.473	1.438	20.7	0.925	0.5191
69	1.561	1.526	20.7	0.923	0.518
70	1.655	1.62	20.7	0.919	0.5157
71	1.753	1.718	20.7	0.917	0.5146
72	1.858	1.823	20.7	0.915	0.5135
73	1.968	1.933	20.69	0.908	0.5095
74	2.085	2.05	20.69	0.906	0.5084
75	2.21	2.175	20.68	0.904	0.5073
- 76	2.341	2.306	20.68	0.9	0.5051
77	2.481	2.446	20.68	0.896	0.5028
78	2.63	2.595	20.67	0.892	0.5006
79	2.786	2.751	20.67	0.89	0.4994
80	2.953	2.918	20.66	0.884	0.4961
81	3.13	3.095	20.66	0.882	0.4949
82	3.316	3.281	20.66	0.875	0.491
83	3.515	3.48	20.65	0.871	0.4888
84	3.725	3.69	20.65	0.865	0.4854
		3.911	20.64	0.86	0.4826
85	3.946				
86	4.181	4.146	20.63	0.854	0.4792
87	4.43	4.394	20.63	0.848	0.4759
88	4.693	4.658	20.62	0.841	0.4719
		4.938	20.61	0.835	0.4686
89	4.973				
90	5.27	5.235	20.61	0.831	0.4663

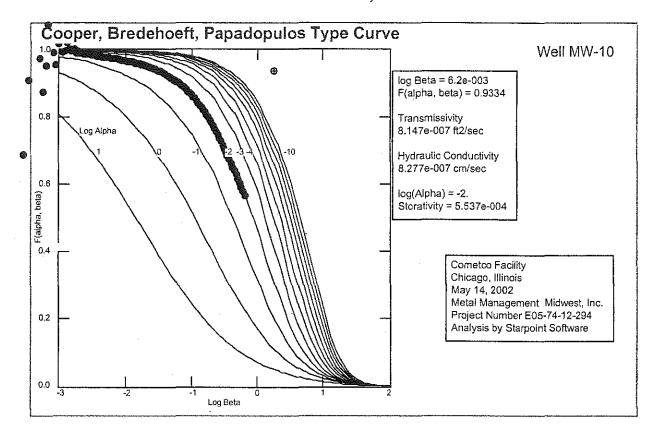
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Cometco Facility

0.4		5.540	00.0	0.000	
91	5.583	5.548	20.6	0.823	0.4618
92	5.915	5.88	20.6	0.816	0.4579
93	6.266	6.231	20.59	0.808	0.4534
94	6.64	6.605	20.58	0.801	0.4495
95	7.035	7.	20.57	0.791	0.4439
96	7.453	7.418	20.56	0.782	0.4388
97	7.896	7.861	20.55	0.774	0.4343
98	8.366	8.331	20.54	0.764	0.4287
99	8.865	8.83	20.53	0.753	0.4226
100	9.391	9.356	20.52	0.745	0.4181
101	9.95	9.915	20.51	0.733	0.4113
102	10.54	10.51	20.5	0.722	0.4052
103	11.17	11.13	20.49	0.71	0.3984
104	11.83	11.8	20.48	0.698	0.3917
105	12.53	12.5	20.47	0.686	0.385
106	13.28	13.24	20.45	0.675	0.3788
107	14.07	14.03	20.44	0.66	0.3704
108	14.91	14.87	20.43	0.648	0.3636
109	15.79	15.76	20.41	0.634	0.3558
110 `	16.73	16.69	20.4	0.619	0.3474
111	17.72	17.69	20.38	0.603	0.3384
112	18.78	18.74	20.36	0.585	0.3283
113	19.89	19.86	20.35	0.572	0.321
114	21.07	21.04	20.33	0.553	0.3103
115	22.32	22.29	20.32	0.538	0.3019
116	23.65	23.61	20.3	0.521	0.2924
117	25.05	25.02	20.28	0.502	0.2817
118	26.54	26.51	20.26	0.482	0.2705
119	28.12	28.08	20.24	0.463	0.2598
120	29.79	29.75	20,23	0.445	0.2497
121	31.55	31.52	20.21	0.426	0.2391
122	33.43	33.39	20.19	0.408	0.229
123	35.41	35.38	20.17	0.386	0.2166
12 4	37.51	37.48	20.15	0.367	0.2059
125	39.74	39.7	20.13	0.345	0.1936
126	42.1	42.06	20.1	0.324	0.1818
127	44.6	44.56	20.08	0.302	0.1695
128	47.24	47.21	20.06	0.28	0.1571
129	50.05	50.01	20.04	0.259	0.1453
130	53.01	52.98	20.02	0.237	0.133
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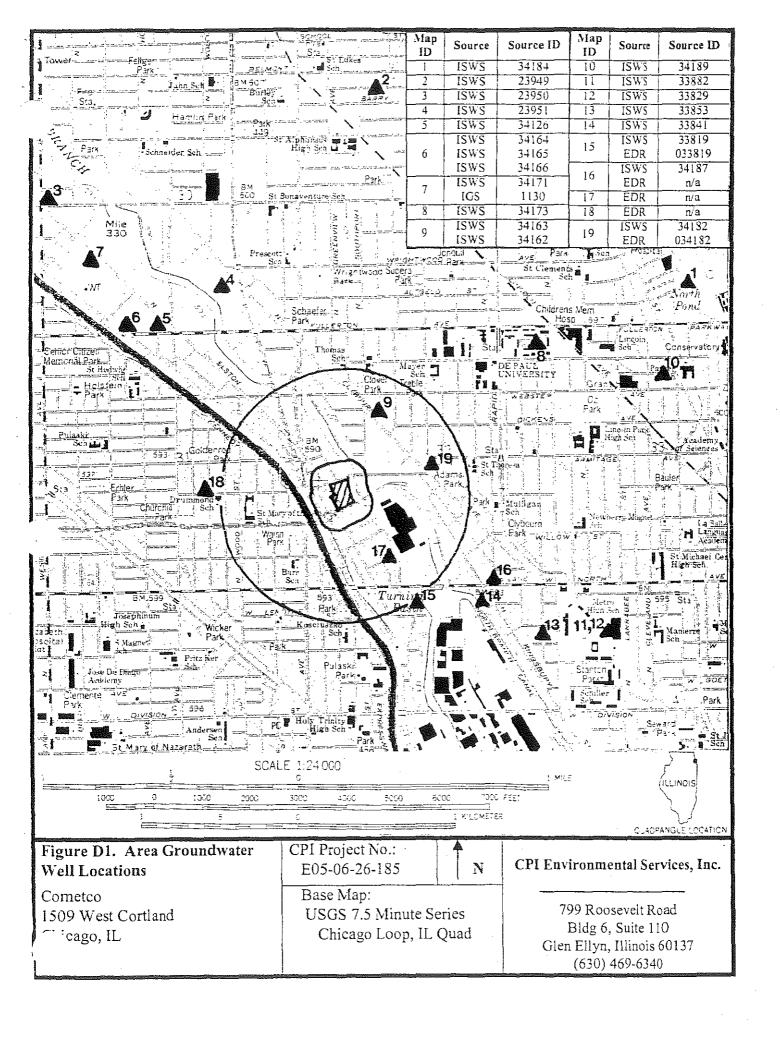
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APPENDIX C

WATER WELL SURVEY DATA



TOPOGRAPHIC MAP - 467249.1s - Continental Placer, Inc. W ADDISON ST H CALIFORNIA AVE CONRAIL BALFICAL SAV 3PZO W BELMONT AVE CMSIPAN NKEDZIE AVE <u>(6/i</u> WICIVERSEY PKWY WOUTHWILD A N WESTERN AVE [5] 0 N'HALSTED ST H SANDBURG TER ILLA SALLE ST N WESTERN AVE N DAKLEY BLVD NWELLS ST N CLARK €¥13 440 N CLARK ST N SIVIE EL 51g THE PART OF THE PA N KEDZIE AVE G<u>¥</u> N DAMEN AVE OAKLEY BLYD AND A:520 AND NW RAILPOAD RACING AVE W RANDOLPH ST H OAKLEY BL WESIERN 믕 2 Miles Major Roads Contour Lines Waterways (HD) Closest Hydrogeological Data \odot Earthquake epicenter, Richter 5 or greater Groundwater Flow Direction Closest Federal Well in quadrant 0 (GT) Indeterminate Groundwater Flow at Location 3 Closest State Well in quadrant (GV) Groundwater Flow Varies at Location **(P)** Closest Public Water Supply Well

TARGET PROPERTY: ADDRESS: CITY/STATE/ZIP: LAT/LONG:

Cometco Corporation 1509 West Cortland Street Chicago 1L 60622 41.9163 / 87.6651 CUSTOMER: CONTACT: INQUIRY#: DATE: Continental Placer, Inc. Mike Place

RY#: 467249.1s February 28, 2000-9:53 am

GEOCHECK VERSION 2.1 SUMMARY

TARGET PROPERTY COORDINATES

Latitude (North):

41.916302 - 41 54 58.7"

Longitude (West):

87.665100 - 87 39 54.4"

Universal Transverse Mercator: Zone 16

UTM X (Meters): UTM Y (Meters):

444844.2 4640483.5

USGS TOPOGRAPHIC MAP ASSOCIATED WITH THIS SITE

Target Property:

2441087-H6 CHICAGO LOOP, IL

GEOLOGIC AGE IDENTIFICATION[†]

Geologic Code:

S2

Era:

Paleozoic

System:

Siltrian

Series:

Middle Silurian (Niagoaran)

ROCK STRATIGRAPHIC UNIT

Category:

Stratifed Sequence

GROUNDWATER FLOW INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, including well data collected on nearby properties, regional groundwater flow information (from deep aquifers), or surface topography,=

AQUIFLOW*** Search Radius: 2.000 Miles. The following table shows sites where groundwater flow and depth information was reported. Additional AQUIFLOW™ site information may be available in the GeoCheck® section at the end of this report.

	DISTANCE	DIRECTION	GENERAL DIRECTION
MAPID	FROM TP	FROM TP	GROUNDWATER FLOW
3g	1 - 2 Miles	North	Not Reported
7g -	1 - 2 Miles	NE	E .
8g	1 - 2 Miles	NM .	NW
12g	1 - 2 Miles	NM	ΝE
13g_	1 - 2 Miles	NW	Not Reported
(16g)	1/2 - 1 Mile	NW	S
18g .	1 - 2 Miles	ENE	Not Reported
(21g)	1/4 - 1/2 Mile	NM.	Not Reported .
239	1 - 2 Miles	East	Not Reported
(27g) ·	0 - 1/8 Mile	SSW	E
319	1 - 2 Miles	WSW	SW
(379)	1/2 - 1 Mile	SE	SW
40g	1 - 2 Miles	SE	NE
41 g	1 - 2 Miles	ESË	Not Reported
44g	1 - 2 Miles	SSW	S
54g	1 - 2 Miles	SSE	E
55g	1 - 2 Miles	SSE	Not Reported
56g	1 - 2 Miles	SE	W
57g	1 - 2 Miles	SE	Not Reported
61g	1 - 2 Miles	South	Not Reported
54g	1 - 2 Miles	South	Varies
ö5g	1 · 2 Miles	SSW	Inconclusive

For additional site information, refer to GeoCheck Appendix.

GEOCHECK VERSION 2.1 SUMMARY

General Topographic Gradient at Target Property: General SW

General Hydrogeologic Gradient at Target Property: No hydrogeologic data available.

Site-Specific Hydrogeological Data*:

Search Radius:

2.0 miles

Status:

Not found

FEDERAL DATABASE WELL INFORMATION

WELL THARDAUD	DISTANCE FROM TP	LITHOLOGY	DEPTH TO WATER TABLE
Northern	1 · 2 Miles	Not Reported	Not Reported
Eastern	1/8 - 1/4 Mile	Not Reported	Not Reported
Southern	1/4 · 1/2 Mile	Not Reported	Not Reported
Western	1/2 - 1 Mile	Not Reported	. Not Reported

STATE DATABASE WELL INFORMATION

WELL QUADRANT	DISTANCE FROM TP	DEPTH (FEET)	 SOURCE
Northern	1/4 - 1/2 Mile	1590	IL Private Water Wells Survey
Eastern	1/4 - 1/2 Mile	1616	IL Private Water Wells Survey
Southern (1/4 - 1/2 Mile	1875	IL Private Water Wells Survey
Western	1/2 - 1 Mile	18	IL Private Water Wells Survey

PUBLIC WATER SUPPLY SYSTEM INFORMATION

Searched by Nearest PWS.

NOTE: PWS System location is not always the same as well location.

PWS Name;

TERRACE OAKS TWO

17W635 BUTTERFIELD RD

OAKBROOK TERRACE, IL 60187

Location Relative to TP: 1 - 2 Miles East

PWS currently has or has had major violation(s) or enforcement:

Nο

AREA RADON INFORMATION

EPA Radon Zone for COOK County: 2

Note: Zone 1 indoor average level > 4 pCi/L.

: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.

: Zone 3 indoor average level < 2 pCi/L.

COOK COUNTY, IL

Number of sites tested: 82

Area	Average Activity	% <4 pCi/L	% 4-20 pC//L	% >20 pCi/L
Living Area - 1st Floor	1.273 pCi/L	9 6%	40 o	0°⁄0
Living Area - 2nd Floor	0.900 pCi/L	100%	0°⁄o	0.0
Basement	1,740 pCi/L	93%	7 <u>0</u> 0	00%

Direction Distance Elevation	Site	
3g North 1 - 2 Miles Lower	Shallow Water Depth: Groundwater Flow: Deep Water Depth; Date:	75 Not Reported 77 5/24/93
7g NE 1 - 2 Miles Lower	Site ID: Groundwater Flow: Deep Water Depth: Average Water Depth: Shallow Water Depth: Current Deep Depth: Current Average Depth: Current Shallow Depth: Date:	\$100530354 E 8.5 Not Reported 4.5 8 Not Reported 7 1/24/92
8g NW 1 - 2 Miles Lower	Site ID: Groundwater Flow; Shallowest Water Table Depth: Deepest Water Table Depth: Average Water Table Depth: Date:	092178 NW 0.00h 5.44h Not Reported 9/92
12g NW 1 - 2 Miles Lower	Site ID: Groundwater Flow: Deep Water Depth: Average Water Depth: Shallow Water Depth: Current Deep Depth: Current Average Depth: Current Shallow Depth: Date:	1000211694 NE 7 Not Reported 5 5.81 Not Reported 2.30 11/29/1993
13g NW 1 - 2 Miles Lower	Site ID: Groundwater Flow: Shallowest Water Table Depth: Deepest Water Table Depth: Average Water Table Depth: Date:	102028 Not Reported 1.72ft 16.02ft Not Reported 10/95
16g NW 1/2 - 1 Mile Lower	Site ID: Groundwater Flow: Shallowest Water Table Depth: Deepest Water Table Depth: Average Water Table Depth: Date:	104998 S 13.98ft 16.71ft Not Reported 4/96
18g ENE 1 - 2 Miles Lower	Site ID: Groundwater Flow: Deep Water Depth: Average Water Depth: Shallow Water Depth: Current Deep Depth: Current Average Depth:	S100054974 Not Reported 14 Not Reported 10 12 Not Reported

Current Shallow Depth:

07/1995

Date:

Map ID Direction Distance Elevation	Site	
21g	Site ID:	094288
NW 1/4 - 1/2 Mile Lower	Groundwater Flow: Shallowest Water Table Depth: Deepest Water Table Depth: Average Water Table Depth: Date:	Not Reported 6tt 11ft Not Reported 7/90
23g East 1 - 2 Miles Lower	Site ID: Groundwater Flow: Deep Water Depth: Average Water Depth: Shallow Water Depth: Current Deep Depth: Current Average Depth: Current Shallow Depth: Date:	1000612992 Not Reported Not Reported 8 Not Reported 9.5 Not Reported 08/06/1997
27g SSW 0 - 1/8 Mile Lower	Site ID: Groundwater Flow: Shallowest Water Table Depth: Deepest Water Table Depth: Average Water Table Depth: Date:	091839 E 10.45ft 16.99ft Not Reported 10/91
31g WSW 1 - 2 Miles Lower	Site ID: Groundwater Flow: Shallowest Water Table Depth: Deepest Water Table Depth: Average Water Table Depth: Date:	109282 SW 11.25 11.64 Not Reported 02/10/97
37g SE 1/2 - 1 Mile Lower	Site ID: Groundwater Flow; Shallowest Water Table Depth: Deepest Water Table Depth: Average Water Table Depth: Date:	093301 SW 19.5ft 21.32ft Not Reported 8/93
40g SE 1 - 2 Miles Lower	Site ID: Groundwater Flow: Deep Water Depth: Average Water Depth: Shallow Water Depth: Current Deep Depth: Current Average Depth: Current Shallow Depth: Date.	S100052384 NE 5 Not Reported 2 5 Not Reported 2 03/98
41g ESE	Site ID: Groundwater Flow: Shallowest Water Table Depth:	093540 Not Reported

Date:

Shallowest Water Table Deptn: 7.05 ft

Despest Water Table Depth: 10.11 ft

Average Water Table Depth:

1 - 2 Miles

Lower

Not Reported

10/30/89

Map ID Direction Distance Elevation	Site	
44g SSW 1 - 2 Miles Lower	Site ID: Groundwater Flow: Shallowest Water Table Depth: Deepest Water Table Depth: Average Water Table Depth: Date:	100250 S 4.0' 6.0' Not Reported 10/15/97
54g SSE 1 - 2 Miles Lower	Site ID: Groundwater Flow: Shallowest Water Table Depth: Deepest Water Table Depth: Average Water Table Depth: Date:	110500 E 6.67' 14.33' Not Reported 12/16/97
55g SSE 1 - 2 Miles Lower	Site ID: Groundwater Flow: Deep Water Depth: Average Water Depth: Shallow Water Depth: Current Deep Depth: Current Average Depth: Current Shallow Depth: Date:	S100530738 Not Reported Not Reported Not Reported Not Reported Not Reported Not Reported 03/13/1998
56g SE 1 - 2 Miles Lower	Site ID: Groundwater Flow: Shallowesi Water Table Depth: Deepest Water Table Depth: Average Water Table Depth: Date:	104071 W 1,83ft 16,27ft Not Reported 1/97
57g SE 1 - 2 Miles Lower	Site ID; Groundwater Flow; Deep Water Depth: Average Water Depth: Shallow Water Depth: Current Deep Depth: Current Average Depth:	S102944042 Not Reported Not Reported 13 Not Reported Not Reported Not Reported

01/06/1995 Site ID: 61g S102943634 South Groundwater Flow: Not Reported 1 - 2 Miles Deep Water Depth: Not Reported Average Water Depth: Lower 3

Current Shallow Depth:

Date:

Shallow Water Depth: Not Reported Current Deep Depth; Not Reported Current Average Depth:

Not Reported

Current Shallow Depth: Not Reported

Date: 10/20/1993

64g Site ID: 102101 South Groundwater Flow: Varies 1 - 2 Miles Shallowest Water Table Depth: 22 Lower Deepest Water Table Depth: Average Water Table Depth: Not Reported Date: 5/96

Map ID Direction Distance Elevation

Site.

65g SSW 1 - 2 Miles Lower

Site ID:

Groundwater Flow:

S102943733 Inconclusive

Deep Water Depth: Average Water Depth: 12.31

Shallow Water Depth.

Not Reported 3.59

Current Deep Depth: Current Average Depth: 12.31 Not Reported

Current Shallow Depth:

3.59

Date:

11/05/1992

The following regulatory files were reviewed by a member of EDR's professional field research team in an effort to identify groundwater flow direction and depth information. However, this information was not evident in the reports. This may be for a number of reasons, such as groundwater monitoring wells not being part of the field work or groundwater not having been encountered during drilling. This information is provided to save you time and money in the conduct of your hydrogeological

Map ID	Date	Type Of Report
1g	01/04/1993	Not Reported
2g	Not Reported	Not Reported
4g	Not Reported	Not Reported
5g	10/04/1995	Not Reported
6g	Not Reported	Not Reported
9g	03/1992	Not Reported
10g	02/10/1998	Not Reported
11g	Not Reported	Not Reported
14g	03/13/1992	Not Reported
15g	06/1992	Not Reported
17g	Not Reported	Not Reported
19g	Not Reported	Not Reported
20g	10/1994	Not Reported
22g	08/27/1992	Not Reported
24g	Not Reported	Not Reported
25g	Not Reported	Not Reported
26g	06/24/1994	Not Reported
28g	Not Reported	Not Reported
29g	Not Reported	Not Reported
30g	06/21/1995	Not Reported
32g	Not Reported	Not Reported
33 g	Not Reported	Not Reported
3 4g	06/11/1992	Not Reported
35g	03/08/1993	Not Reported
36g	Not Reported	Not Reported
38g	04/1991	Not Reported
39g	11/13/1989	Not Reported
42g	Not Reported	Not Reported
43g	04/09/1992	Nat Reported
45g	11/04/1991	Not Reported
46g	10/96	Not Reported
47g	01/03/1992	Not Reported
48g	08/07/1992	Not Reported
49g	1/93	Not Reported
50g	3/18/1988	Not Reported
51g	05/01/1997	Not Reported
52g	Not Reported	Not Reported
53g	Not Reported	Not Reported
58g	Not Reported	Not Reported
-	· · · · · · · · · · · · · · · · · · ·	

Map ID Direction Distance Elevation

Site

Map ID	Date	Type Of Report
59g	Not Reported	Not Reported
60g	5/26/92	Not Reported
62g	3/29/93	Not Reported
63g	06/17/1992	Not Reported

Well Closest to Target Property (Northern Quadrant)

BASIC WELL DATA

Site ID:

415554087392801

Distance from TP:

1 - 2 Miles

Site Type:

Single well, other than collector or Ranney type Not Reported

County:

Coak

Year Constructed: Altitude:

598.00 ft.

State:

Illinios

Well Depth:

2013.00 ft.

Topographic Setting: Not Reported

Depth to Water Table;

Not Reported

Prim. Use of Site:

Withdrawal of water

Date Measured:

Not Reported

Prim. Use of Water: Bottling

LITHOLOGIC DATA

Not Reported

WATER LEVEL VARIABILITY

Well Closest to Target Property (Eastern Quadrant)

Peter Hand Brusy Co.

BASIC WELL DATA

Site ID:

415455087394501

Distance from TP: Single well, other than collector or Ranney type

1/8 - 1/4 Mile

Site Type: Year Constructed:

1905

County:

Coak

Altitude: Well Depth: 590.00 ft. 1973.00 ft. State:

Illinics Topographic Setting: Not Reported

Depth to Water Table:

Not Reported

Prim. Use of Site: Prim. Use of Water:

Witndrawal of water

Date Measured: Not Reported Bottling

LITHOLOGIC DATA

Not Reported

WATER LEVEL VARIABILITY

Well Closest to Target Property (Southern Quadrant)

Single well, other than collector or Ranney type

BASIC WELL DATA

Site ID: Site Type: 415446087393901

Distance from TP:

1/4 - 1/2 Mile

Year Constructed:

Not Reported

County:

Cook Iliinios

Altitude: Well Depth: 593.00 ft. 1850.00 ft. State:

Topographic Setting: Not Reported

Depth to Water Table: Date Measured:

Not Reported Not Reported

Prim. Use of Site: Prim. Use of Water:

Withdrawal of water Bottling

LITHOLOGIC DATA

Not Reported

WATER LEVEL VARIABILITY

Well Closest to Target Property (Western Quadrant)

Single well, other than collector or Ranney type

BASIC WELL DATA

Site ID: Site Type: 415459087403602

Distance from TP:

1/2 - 1 Mile

Year Constructed:

Not Reported

County:

Cook

Altitude:

593.00 ft.

State:

Illinios

Well Depth: Depth to Water Table: 1978.00 ft. Not Reported

Topographic Setting: Not Reported Prim. Use of Site:

Withdrawal of water

Date Measured:

Not Reported

Prim. Use of Water. Industrial

LITHOLOGIC DATA

Not Reported

WATER LEVEL VARIABILITY

Water Wells Information:

Well Within 1/4 - 1/2 Mile of Target Property (Northern Quadrant)

Well ID:	034162	Second ID:	Not Reported	
Into Source:	IL Private Water Wells Survey			
Owner:	BIRK BREWING CO		•	
Permit:	Not Reported	Date Drillied:	09/00/1943	(a)
Depth (in feet):	1590	Aquifer Type:	Bedrock	
County Code:	031	County:	COOK	
Township:	40N	Range:	14E	
Section:	32	Plot Location:	6F	
Well Use:	IN	Well Type:	11	
Record Type:	Construction Report, Geology, Chemical Analysis, Any other type of record			
Driller:	GEIGER			

Weil Within 1/4 - 1/2 Mile of Target Property (Eastern Quadrant)

	, ,		,	
Weil ID: Info Source:	034182 IL Private Water Wells Surve	Second ID:	Not Reported	
Owner:	JEFFERSON ICE CO PLAN	T #5		
Permit:	Not Recorted	Date Drilled:	00/00/1895	(0)
Depth (in feet):	1615	Aquifer Type:	Bedrock	(19)
County Code:	031	County:	COOK	_
Township:	40N	Range:	14E	
Section:	32	Plot Location:	Not Reported	
Weli Use:	IN ·	Well Type:	r.	
Record Type:	Any other type of record			
Driller:	MILLER BROS			

Well Within 1/4 - 1/2 Mile of Target Property (Southern Quadrant)

Well ID:	033819	Second ID:	Not Reported	
Info Source:	IL Private Water Wells Survey			
Owner:	CHICAGO BREWERY CO			
Permit:	Not Reported	Date Drilled:	00/00/1914	
Depth (in feet):	1875	Aquiter Type:	Bedrock /	15
County Code:	031	County:	соок (
Township:	39N	Range:	14E	_
Section:	05	Plot Location:	5H	
Well Use:	IN	Well Type:	!	
Record Type:	Construction Report, Geology, C	hemical Analysis		
Oriiler:	GEIGER			

Well Within 1/2 - 1 Mile of Target Property (Western Guadrant)

Well ID:

Info Source: Owner:

IL Private Water Wells Survey MAYFAIR CONST. CO.

Permit: Depth (in feet): County Code:

Township: Section: Well Use:

Record Type:

Driller:

MONITORING WELL 18

031 40N 31

Test Weli Construction Report, Geology

TESTING SERVICE

Second ID:

Not Reported

12/08/1992

Date Drilled:

Aquiter Type: County: Range: Plot Location: Well Type:

Unconsolidated COOK 14<u>2</u> Not Reported Bored

-likely plotted in center of Section

NP

GEOCHECK VERSION 2.1 PUBLIC WATER SUPPLY SYSTEM INFORMATION

Searched by Nearest PWS.

PWS SUMMARY:

PWS ID: Date Initiated: IL3117283

PWS Status:

Active

Distance from TP: 1 - 2 Miles

- ruord in error?

PWS Name:

Not Reported

TERRACE OAKS TWO

Date Deactivated: Not Reported

Dir relative to TP: East

17W635 BUTTERFIELD RD

OAKBROOK TERRACE, IL 60187

Addressee / Facility:

Other

ARTHUR ROGERS INC

635 BUTTERFIELD SUITE 150

OAKBROOK TERRACE, IL 60181

Facility Latitude:

41 55 36

Facility Longitude: 087 38 48

City Served:

Not Reported

Treatment Class:

Treated

Population Served: Under 101 Persons

PWS currently has or has had major violation(s) or enforcement:

No

(OFFICL , (USE ONLY)	FIPS TWN	RNG SC I	PL OWNER		DRILLER	DATE	PERMIT	DPTH	REC	US	TY	AQ
						00/00/1007		1200				
NP - 34185	031 40N	14E 28	LINCOLN PARK	" "	Total March Michigan	00/00/1907		1200		ÞΚ		
ур "293096 В	031 40N EMARKS: 1		ALMALGAMATED TRUST&SAVINGS 529 C/O GARY KROMELOW		•			15	RG	МО	1711	UN
ND -293048	031 40N	14E 28	ALMALGAMATED TRÚST&SAVINGS 2629 C/O GARY KROMELOW	#1	FOUNDATION ENGINEER	03/14/1996		15	RG	MO	DГ	ΠM
N A-293095	031 40N	14E 28	ALMALGAMATED TRUST&SAVINGS 529 C/O GARY KROMELOW	#2	FOUNDATION ENGINEER	03/14/1996		15	RG	МО	DL	ΠM
MD 203007	031 40N	14E 28	ALMALGAMATED TRUST&SAVINGS	#4	FOUNDATION ENGINEER	03/14/1996	•	15	RG	МО	DL	UN
H	REMARKS: :	TRUST #20	529 C/O GARY KROMELOW		CDAV	00/00/1934		1580	OG	PK	1.1	ВÞ
34184	031 40N	14E 28 4	AB LINCOLN PARK		EXPLODATION TECH INC	01/30/1992	MONITORING WELL	14		TW	. ,	
NP 235432	031 4UN	14E 29	AUDIT MULTA *****		Ent Boldin 1911 12cm 1211	01/20/17/	TOTAL TOTAL NEEDS		400	***	2.7.25	V.,
N ₹ 235433	CEDARKS:	145 20	AMOCO OTI CO		EXPLORATION TECH. INC.	01/30/1992	MONTTORING WELL	15	RG	TW	BD	UN
M1 732433	NOB LEG	146 22	529 C/O GARY KROMELOW 4B LINCOLN PARK AMOCO OIL CO. WELL MW-1A ***** AMOCO OIL CO. WELL RW-1 ******* 5H BEST BREWING CO WESTERN & ELSTON AVES LISTER CLUE WORKS		Table Holding and Amount and	,,						
ል በነበርር ል	MAN LEA	14E 29 6	5H BEST BREWING CO		J P MILLER	00/00/1901		2013	OGCR	IC		BR
3 23950	031 400	14E 30	WESTERN & ELSTON AVES			00/00/0000		179	OG	IC		BR
NP 34180	031 40N	14E 30				00/00/0000		700	Ò	IC	11	BR
NP 34181	031 40N		J LISTER GLUE WORKS		J P MILLER	00/00/0000		1200	0	IC	11	BR
NP 34179	031 40N		INTERNATIONAL HARVESTER CO			00/00/1890		1565	CO	IC		BR
NP 34178			INTERNATIONAL HARVESTER CO	(DU	7 D W77 I 70	00/00/1890		1500	CO	IC	11	BR
NP 34167	031 40N		DANIEL BOONE WOOLEN MILLS/I	LİBR		00/00/1914		1099	OG	IC		BR
4 23951		14E 30 3	BB AMERICAN BRIDGE CO			00/00/1914		1650	00	IC		HR
5 34126		14E 30 5	5A 2429 ELSTON AVENUE			00/00/1914		700	C			BR
C 34165	031 40N	14E 30 6	SA ROYAL BREWING CO/BRAND BREW	NING		00/00/1897		1650		IC		BR
4 3 34164	031 40N	14E 30 6	SA ROYAL BREWING CO/BRAND BREW	NING	O B WITHER	03/00/1899		1598	OGCI	IC	$D\Gamma$	BR
. E	REMARKS: (DRIGINAL	DEPTH IN 1899 - 1346'	RI	EDRILLED IN JAN. 1915	TO 1598'						
6 34166	031 40N	14E 30 6	SA ROYAL BREWING CO/BRAND BREW	WING		09/00/1890		1294		IC		BR
7 34171	031 40N	14E 30 7	C DURKEE FAMOUS FOODS		VARNER	00/00/1935		1958	QGC		1 1	BR
NP 34172	031 40N		E FECKER BREWING CO		J P MILLER	00/00/1890		1613	0	ΙC	11	BR
-	031 40N					00/00/1912		1525	CO	IC		BR
NP 34183 Nr 235365			MAYFAIR CONST. CO.		TESTING SERVICE	12/07/1992	MONITORING WELL	20	RG	TW	BD	UN
Mb 532302	TUNDER TON											
			MAYFAIR CONST.CO.		TESTING SERVICE	12/07/1992	MONITORING WELL	20	RG	TW	BD	ŪΝ
NP 235364	AND TEO	****** TAD 27	WELL MW-8 ********									
N(235363			MAYFAIR CONST, CO.		TESTING SERVICE	12/08/1992	MONITORING WELL	18	RG	TW	BD	UN
to 65 5 2 5 2 0 3	י פאל מאש פ	****	WELL MW-9 *******					100				
<u>/29497</u>	031 40N		ATLANTIC BREWING CO/PAUL PO	OHL	J P MILLER	00/00/1800	•	1304	0	IC	11	ΒR
	031 40N		JEFFERSON ICE CO PLANT #5		MILLER BROS	00/00/1895		1616	0	IC	11	BR
34186			NORTHWEST BREWERY		J P MILLER	00/00/1897		1302	0	IC		BR
	031 40N		GUTMANN TANNERY CO			00/00/1900	•	990	CO	IC	П	BR
7 2 4 1 0 7			PETER HAND BREWERY CO		J P MILLER	00/00/1905		> 1972	CO	ΙC	11	BR
34187	031 40N		SPIELMAN BROS VINEGAR WORKS	S	J P MILLER	05/00/1899		1590	OGC	IC	11	BR
29502	031 40N	14E 32	BIRK BREWING CO/CORPER & NO	OCKI	J P MILLER	06/00/1899		1565	O	IC	11	BR
R 34173			LH F P SMITH WIRE & IRON WORKS	Ŝ	GEIGER	00/00/1897		240	OGC	IC	1	BR
a 34163			F BIRK BREWING CO		J P MILLER	00/00/1893		1610	OG	IC	H	BR
د کیت کی	222 4011										, ,	

Cook County - Private Well Database - Page 3

Monday Nov 9 1998 14:29:37

(OFFICE) (USE ONLY)	FIPS	TWN	RNG	sc	PL	OWNER	DRILLER	DATE	PERMIT	DPTH	REC	US	TY I	ΑQ
	-			-							~		~- ·	
9 34162	031	40N	14E	32		BIRK BREWING CO	GEIGER	09/00/1943		1590	OGRC	IC	1	BR
ND 23954						BARTHOLOMAE & LEICHT BREWING C	J P MILLER	00/00/1889		1630	0	IC	3	BR
NP34177	031	40N	14E	33		HETZEL PKG CO		00/00/1895		160	Ω	IC	11	
10 34189	031	40N	14E	33	5G	U S BREWING CO/SCHMIDT BREWERY	J P MILLER	00/00/1901		1593	OGCX	IC	Ì į F	3R

Illinois State Water Survey Private Well Database Page 1 Monday Nov 9 1998 14:29:37

Query the Private Well Database through the World Wide Web http://gwinfo.sws.uiuc.edu/gwdb-query.html

County: Cook

Township Code: 39N Range Code: 14E Section Codes: 4, 5, 6

20 records were found for the specified locations.

Questions : Contact the Illinois State Water Survey's

Ground Water Division @ (217)333-9043

Publication: Please cite the Illinois State Water Survey's

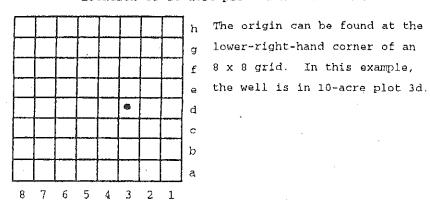
Private-Well Database in all publications based wholly or partially on this information.

Please Note:

The data in the Private Well Inventory Database is a listing of those non-municipal wells which are known to the Illinois State Water Survey (ISWS). This information has been entered verbatim from well logs submitted by the driller, chemical analysis reports, well sealing forms, well inventory forms from the 1930-1934 well survey, and other special projects. The accuracy of this data is controlled by those who submitted the form. Information in the private well database has not been verified.

This data cannot be resold or redistributed. The Illinois State Water Survey must be acknowledged in any use of this material.

Location of 10-acre-plot within a Section



(OFFICE) USE ONLY)	FIPS	NWI	RNG	SC	PL	OWNER	DRILLER	DATE	PERMIT	DPTH	REC	US	ТY	ÃQ
-	NP 33871	031	39N	14E	04		REPUBLIC BOX CO		00/00/0000				IC	 	
	NP33869	031	39N	14E	04		OSCAR MAYER & CO	GEIGER	00/00/1909		1628		ĪC	H	BR
	265181	.031	39N	14E	04		OSCAR MAYER #OW-5	WISCONSIN TEST DRLG	02/21/1995		21		МО	ĎΓ	ŪN
	265180	031	39N	14E	04		OSCAR MAYER #0W-4	WISCONSIN TEST DRLG	02/22/1995		20	RG	МО	DL	UN
ΝF	265179	031	39N	14E	04		OSCAR MAYER FOOD #0W-3-94	WISCONSIN TEST DRIG.	03/10/1994	*	10	RG	MO	DL	UN
	265177	031	39N	14E	04		OSCAR MAYER FOOD #0W-1-94	WISCONSIN TEST DRLG	03/10/1994		10	RG	MO	DL	UN
	265178	031	39N	14E	04		OSCAR MAYER FOOD #0W-2-94	WISCONSIN TEST DRLG.	03/10/1994		10	RG	MO	DL	UN
	μρ33880	031	39N	14E	04	2E	SEDGEWICK & BERITHAVEN	MAYER	00/00/1909		1628	RG	IC	Ĥ	BR
	11 33882	031	39N	14E	04	7G	SIEBEN BREWING CO/OLD EXCELSIO	MILLER	05/00/1897		1240	OGC	IC	ÌΪ	BR
	12. 33829	031	39N	14E	04	7G	CRYSTAL ICE CO	J P MILLER	07/00/1897		1615	QG	IC	i i	BR
	√ 33836	031	39N	14E	05		EARNEST BROS BREWERY	J P MILLER	00/00/1889		1655	0	IC	ÌΙ	BR
	23909	031	39N	14E	05		BUSH & GERTZ PIANO CO/PATENT S		00/00/1910		412	0	IC	. ,	
	33892	031	3 9 M	14E	05		WEST SIDE BREWERY		00/00/1914		2100	C	IC	} }	BR
N	33482	031	39N	14E	05		STANDARD BRANDS/FLEISCHMAN YEA	GEIGER	00/00/1918		1966	QG	IC	H	BR
	189827	031	39N	14E	05		STANDARD BRANDS #1	LAYNE-BOWLER	00/00/1922		1966	0	IC		
	33492	031	39N	14E	05		STANDARD BRANDS	LAYNE-BOWLER	00/00/1925		1962	OG	IC		BR
	33809	031	39N	14E	05		HERMAN & CO/AMERICAN MALTING C	J P MILLER	02/02/1899		1302	OGC	IC	įį	BR
	1333853	031	39N	14E	05	1G	PRIMA PRODUCTS/INDEPENDENT BRE	J P MILLER	00/00/1914		2164	OGC	IC	ÌÌ	BR
	433841	031	39N	14E	05	3 H	FLEISCHMAN YEAST	LAYNE-BOWLER	00/00/1925		1962	OG	IC	11	BR
	633819	031	39N	14E	05	5H	CHICAGO BREWERY CO	GEIGER	00/00/1914		1875	RGC	IC	1	BR

Query the Private Well Database through the World Wide Web http://gwinfo.sws.uiuc.edu/gwdb-query.html

County: Cook

Township Code: 37N Range Code: 15ED

Section Codes: 5, 6, 7, 8

O records were found for the specified locations.

Questions : Contact the Illinois State Water Survey's

Ground Water Division @ (217)333-9043

Publication: Please cite the Illinois State Water Survey's

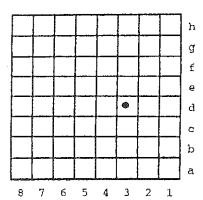
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Location of 10-acre-plot within a Section



The origin can be found at the lower-right-hand corner of an 8 x 8 grid. In this example, the well is in 10-acre plot 3d.

ILLINOIS STATE WATER SURVEY PICS DATABASE EXPLANATION

SWS ID

ISWS facility ID number

Name

Facility name

No.

ISWS point source well/intake number

Status

Point source status of well/intake

A = Abandoned - no longer in existence, no affidavit on file, or do not know if it has been filled in

C = Capped - cap attached to top

D = Disconnected - disconnected from system
 E = Emergency - available for standby use
 I = In Use - produces major portion of water

O = Observation - used for water level measurements

S = Sealed - filled in

U = Unused - exists but not used

Location

County, Township, Range, Section, 10-Acre plot

Depth

Depth (well to nearest ft)

Type log

D = driller's log
C = correlated log
S = sample study log
- = log not available

Year constructed

Year point source initially constructed

Driller

Well drilling contractor of well

199

sheet 2 t. 40N s. 14E s. 32 company S. B. Geiger and Companyole No. FARM Birk Bros. Brewing Co. Hole No.

.]	Chart	Thicks	1 e B 3	Depth	
io.	Strata	Feet	In.	Foot	ln.
	Casing record: 12" pipe to 110' 10" pipe from 417' to 570 8" pipe from 1141' to 12 127' of 8" pipe, shoe on 8" hole to bottom	681 top an	nd b	ottom	
	See file for M.V. Strantz Sample 1950.	Study	- 0	ctober 20	,
					,
				.	
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ŀ	<u>'</u> .	ì	j		

	Town	Chica	go	Township	Lake	View	n. 14E	
	Company	S.B.	Geiger	and Co	ompany	τ,		Sec.
			Bros. B					32
1				and Co	o., Chi	cago		
	Elevation	597 to	p. map			40		
İ	Collector					N		
	Confident		Date Drille	_{od} 1947	3 ·	,	السلسلسل	t
_	ggA	r. NW S	E NW					

	No.	N # 2 2 20 Strata	Thickr	1053	Depth	
٠		6 3378 Strata	Feet	Įn.	Feet	ln.
:		2117 N. Wayne Ave., indriv	eway	appr	ox. 150	1 :
		S. of Webster St.	· ·			:
1		Drift	110		110	
		Lime	315	ļ	425	
		Broken lime and shale	35		460	
-		Shale	103		:563	,
ļ		Lime	332		895	1
1		St. Peter sand	260	1	1155	1
ļ		Blue shale	8		1163	
{		Lime	58	,	1221	;
Ì		Very hard lime	9	[·	1230	
		Red marl	2	[·	1232	1
}		Lime	21		1253	
1		Cavey red marl	9		1262	
1	٠.	Hard sandy lime	26		1288	
ļ	{	Green shale	3		1291	
	1	Sand	11		1302	
1	Ş.	Green shale	2		1304	
1		Sand	21	`	1325	
į		Gray lime	30	}	1355	,
1	•	Broken lime	15	1.	,	ļ
		Green shale	2	Į į	1372	
ļ	:	Gray lime	8		1380	
	•	Sand	10		1390	
		Red sand	13)	1403	.
Ì		Hard lime	_15)	1418	
- [Hard sand	32		1450	
ĺ		Hard white sand	40		1490	.
1		Soft white sand	6		1496	
2		Hard white sand .	4.	1	1500	
		Soft white sand	75	1	1575	
		Hard-lime	25-	·	1600-	1 2 2 2
	COL	JULY COOK		32	-40N-14	Teil

2-40N-14E

COUNTY COOK

Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906. 385 190

.-DRILL RECORD

MPANY C. W. Varner

HOLE NO. HOLE NO.

am Durkee Famous Foods

	Thloknei	5	Dapth	
STRATA	Feet	_tn.	Feat	ln.
Lime, gray and shale Limestone, gray and brown Shale, blue and lime,gray Limestone, dark gray Shale, blue Sandstone	40 25 21 14 6 147		1745 1770 1791 1805 1811 1958	
Static Water Level - 214'				
Casing record: 20" to 87' 183' of 12 1/2"				
Diameter: 20" to 87! 15" from 87' to 539! 12" from 539' to 1368! 10" from 1368' to 1958!				
Casing Record and Hole Si by F. M. Gray, Jr. in	ze revi 1939	s ed.		
Casing Record: 20 " 0- 16" 12- 12 1/2" 3		to :	5531 6"	
Tole size: 15" from 87' to 553' 6" 12" from 553' 6" to 136 10" from 1367' 6" to 19	571 611			
20" pipe to 12! instead of 37% of 16" pipe to 87! 12" liner is 370'6" to 58 356' to 539! Total Depth is 1945! instead of the correct one by Gray	ead of	nste	1	

John C. Moore Corporation, Rochester, R. Y. Minder and hufes in leaves, each l'atented 1906. 386700

company C. W. Varner

HOLE NO.

Durkee Famous Foods HOLE NO. FARM

No.		Thiakne		Depth			
No.	STRATA	Fest	In.	Feet	In.		
	Limestone, gray	82		847			
	Limestone, brown and gra-	7 24		871			
.	Sandstone, white, hard	64		935	}		
ľ	Sandstone, some shale]		
1	breaks and lime	10		945			
	Mud, blue	3		948			
+	Limestone, gray, hard	132		1080	ł		
	Limestone, gray, hard	8		1088	{		
	Shale, gray and red	1		1089	,		
	Limestone, gray, hard	4	,	1093	}		
	Dolomite, hard	- 6		1.103			
	Lime, brown	6	}	1109			
	Lime, gray, hard	23		1132	Ì		
	Lime, brown, light	27		1159	ļ		
	Limestone, gray, hard	6		1165			
	Shale and lime, gray and						
į į	brown	40		1205	1		
;	Lime, brown, soft	34		1239	}		
j i	Limestone, gray	10	}	1249	}		
,	Lime, brown and gray	31		1280			
()	Limestone, gray, some			Ì	Ì		
	sand and shale	47		1327			
1:	Limestone, sandy, and				j		
[]	shale	11	}	L338	}		
	Limestone, gray	17		1355			
; 1	Sandstone, hard	91		1446			
:	Sandstone, coarse	18		1464	}		
1	Sandstone, soft	32 '		1.496	1		
) !	Sandstone, brown and gray	19		h515	Í		
:	Lime, dark brown	10	ĺ	1525			
•	Lime, dark gray	12	}	1537			
1	Lime, black	10		1547			
;	Shale, blue	1		1548	{		
	Limestone, gray andshale	}	1	1642			
4	Shale, brown	56	ţ.	1698	!		
	Shale, blue	7		1705	:		

nty Cook

T.-DRILL RECORD

ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Тор	Betton
Surface material to bedrock Limestone Shale Limestone Sandy Limestone Sandstone Shale - caves Limestone - caves Sandstone and shale - caves Shale and limestone Sandstone - hard Sandy Limestone Limestone Shale Sandstone Streaked Sandstone, Limestone, and shale Shale Sandstone (soft) Sandstone (hard) at	27 45555 1017 455 18 18	64 435 910 9417 1226 1226 1380 1570 1610 183 1900	64 4355 9447 122680 122680 13850 1570 16835 1963 1963 2013
65' from surface to rock		·	
Diameter at top 8"			
8" hole to 300' 6½" hole 300' to 1302' 5 3/16" to bottom			
Casing 63'8" of 8" to rock			
95' of 5 3/16" casing bottom 1302'			,

OMPANY J. P. Miller Company Best Brewing Company ATE DRILLED January, 1901
OTHORITY C. B. Anderson ' Mil COUNTY NO. 3372

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906. 386790

Chicago TOWNSHIP COMPANY C. W. Varner FARM Durkee Famous Foods No. AUTHORITY

590+ ELEVATION

COLLECTOR DATE DRILLED 1935 HICONFIDENTIAL

Map No. 11 R. 14E Sec. 30 40 N

No.	STRATA #	Thick	ness	Dep	th
	2670 N. Elston 6 #3377	Feat	In,	Feet	In.
•	Clay, blue and gravel	67		67	
5	Limestone, broken	8	1 .	75	
	Solid formation	at	1 1	75	}
	Limestone, gray, hard	70		145	[
	Lime, gray, broken	5		150	l i
	Lime, white, broken	5		155	1
ATE OF S	Lime, solid, white	16	1 '	171	
	Lime, white and gray hard	14	1 1	185	} !
	Limestone, whitecrevice	3		188	
1	Lime, white and brown	}	1 1		1
	even formation	23	1 1	211	
	Lime, white; crevices wit	βı		ř	į
	soft sides and white mud				į
	streaks	7		218	
/is:_	Limestone, white-hard wi	th 4	} . [222	
gradia gradia (14 pc)	streaks of white mud or		1 1		
	Lime, dark gray, hard	11		233	
56.7.	Limestone, gray, hard (2 soft streaks 6" thick		{ }	į	
	at 237' and 243')				1
/ / / / / / / / / / / / / / / / / / /	Lime, dark gray	11) [244	}
- 1	Lime, dark brown	30]	274	
	Limestone, light gray	10	} }	284	1
	imestone, dark gray, hard	52		336	ĺ
c	Shale and lime, mixed			377	
	Limestone, hard	2 21		379	j
ع	Shale, green	. a		400	į
<u>I</u>	Shale, green ime, brownsand shale, blue shale, blue	ນ ຊ່າງດີ		408	Ì
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	imestone medium	702 202		532	
1	truca norrail ittagrami	233	. }	765	

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	Town South Chicago Township	Chicago	Map No.	
ĺ	company S. B. Geiger & Co.	No.	n 15E	
	Farm Columbia Malting Co.			Sec.
	Authority J. P. Miller Art. We			8
i	Elevation 58.7 Collector C.B.Anderson	37		
i	Confidential Date Drilled JU	N 1009		•
	Date Drilled D.	(110 TOOR		

Na.	6 7383 Strata	Thickn	ens	Depth		
	C 2383	Feet	ln.	Feet	In.	
	105th St. and Fort Wayne R 1100' N. of S. line of sec- 250' W. of city limits (19 450' NE of Indianapolis B.	tion E	and	h i	;	
	Sand, gravel, etc. Limestone Shale Limestone Sandstone Shale, sandy and limestone Limestone	104 426 138 320 107 31 227		104 530 668 988 1095 1126 1353		
	Diameter at top, 10" 10" casing to rock, said to Static level, 154'	а ө б	t 10)O(f) .		
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	ORIGINAL FILED					

COUNTY COOK

INDEX NO.

Dr"' RECC

(PP)

			(4)
GEOLOGI	CAL AND WATER	SURVEYS	WELL RE	CORD
	owner <u>Metr Sanitary Di</u>			#C44
Address <u>C</u>	alumet Sys Tunnel & Res	servoir Chicas	10 JL	~ _
Driller <u>C</u>	ontinental Drilling Cor	<u> npany</u> Licens	e No. <u>1035</u>	46
1. Permit No	none	Date		<u>-</u>
2. Water from	TI	13. County		
4. Screen: D	toft. amin. ft. Slot	Sec. Twp. Rge. Elev.	<u> 37 N </u>	
5. Casing and	Liner Pipe	S,	H NH SE	
Diam. (in.)	Kind and Weight	From (ft)	To (ft)	
1	PVC PERFORATED	158	238	
1	5H 80 PVC		258	
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Maquo ————————	keta shale		2	486
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j	TOWNS, Chicago Township	Map Np. [23E]
1	COMPANY Gray Well Drill. Do.	
ļ	FARM John Mohr & Sons No.	
i	AUTHORITY NO.	37
i	DLEYATION	
1	COLLECTOR Thwaites DATE DELLED	THE SET OF
	5 CONFIDENTIAL 12/1/26-5/19/	
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ċ	No. STRAFA	
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i	DRENT	
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,	Elimple	35 - 73
ì	MIAGABAN	\
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!	Dolonite, light gray to	
}		1-2901-1-1-1-410-1-1-1
į	Dolomite, light gray to white the	450
4	Dollomite, light gray	10 460
	Dolomite, slatey gray	20 486
ì	Dolomite, blue and light	·/
į	E Agray	10 490
1	Ell Dolomite, white, pyritic	
!	题目Dolomite, gray	10 520
i.	型部 Dolomite, bluish gray, 1	
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1	Shale, blue, dolomitib,	120 650
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COOK County

Private Well Data Base Query Result

Tuesday, October 10, 2000

,	wid:	fips:	twn:	rng;	sec:	plot:	owner:	driller:	date drilled	permit:	depth:	record type:	well use:	well lype:	aq type:
	235365	031	40N	14E	31 WELL	MW-2	MAYFAIR CONST. CO.	TESTING SERVICE	12/07/1992	MONITORING	20	RG	TW		UN
2	235364	031	40N	14E	31		MAYFAIR CONST.CO.	TESTING SERVICE	12/07/1992	MONITORING	20	RG	TW	BD	UN
2	235363	031	40N	14E	31 WELL	MW-9	MAYFAIR CONST. CO.	TESTING SERVICE	12/08/1992	MONITORING	18	RG	WT	BD	UN
	34183	031	40N	14E	31		JEFFERSON ICE CO		00/00/1912		1525	СО	IC		BR
	34172	031	40N	14E	31		E FECKER BREWING CO	J P MILLER	00/00/1890		1613	0	IC		BR
	29502	031	40N	14E	32		BIRK BREWING CO/CORPER & NOCKI	J P MILLER	06/00/1899		1565	0	1C		BR
	29497	031	40N	14E	32		ATLANTIC BREWING CO/PAUL POHL	J P MILLER	00/00/1800		1304	0	IC [°]		BR
	34190	031	40N	14E	32		SPIELMAN BROS VINEGAR WORKS	J P MILLER	05/00/1899		1590	OGC	IC		BR
d's	34187	031	40N	14E	32		PETER HAND BREWERY CO	J P MILLER	00/00/1905	ند	1972	со	lC		BR
	34186	031	40N	14E	32		NORTHWEST BREWERY	J P MILLER	00/00/1897		1302	0	1C		BR
	34182	031	40N	14E	32		JEFFERSON ICE CO PLANT #5	MILLER BROS	00/00/1895		1616	0	IC		BR
	34176	031	40N	14E	32		GUTMANN TANNERY CO		00/00/1900		990	CO	IC		BR
Po	34173	031	40N	14E	32	1H	F P SMITH WIRE & IRON WORKS	GEIGER	00/00/1897		240	OGC	IC		BR
Ν	34163	031	40N	14E	32	6F	BIRK BREWING CO	J P MILLER	00/00/1893		1610	OG	IC		BR
Q	34162	031	40N	14E	32	6F	BIRK BREWING CO	GEIGER	09/00/1943		1590	OGRC	IC		BR



Illinois State Water Survey

Main Office • 2204 Griffith Drive • Champaign, IL 61820-7495 • Tel (217) 333-2210 • Fax (217) 333-6540

Peoria Office • P.O. Box 697 • Peoria. IL 61652-0697 • Tel (309) 671-3196 • Fax (309) 671-3106



Ground-Water Section • Tel (217) 333-4300 • Fax (217) 244-0777

November 9, 1998

Mr. Ryan Keith Andrews Engineering 3535 Mayflower Springfield, IL 62707 98-1416 Cometos Corporados

Dear Mr. Keith:

As you requested during our telephone conversation on November 6, we are enclosing printouts from our Private Well and Public, Industrial, Commercial Survey (PICS) Databases for the following locations in Cook County:

<u>Township</u>	Range	Sections
40 North	14 East	28-33
39 North	14 East	4-6

No available information is indicated on the printout by the statement "0 records were found for the specified locations." Also enclosed are explanations of the Illinois State Water Survey Private Well and PICS Databases.

The data included in the Private Well Database are those non-municipal wells which are known to the Illinois State Water Survey, and the PICS Database is an inventory of municipal well information and large industrial ground-water users. We may not have a copy of well records for these ground-water users.

The invoice accompanying this request covers the \$20.00 query fee for private well information, \$20.00 query fee for PICS information, and a \$0.10 per page charge for 9 pages, plus a \$5.00 shipping and handling fee, totaling \$45.90.

If you have any questions or if we can be of further assistance, please call.

Sincerely.

Susie Dodd

Assistant Supportive Scientist

Ground-Water Section

Phone: (217) 333-9043

sd/psh (110698/7sd)

Enclosures as stated

ISWS 10-ACRE PLOT LOCATION SYSTEM

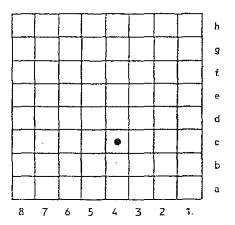
The following is an explanation of the ISWS Private Well Database location system.

The location system uses Township, Range, and Section. The location consists of five parts: County abbreviation, Township, Range, Section, and coordinate within the section (subsection or 10-acre plot). Sections are divided into rows of 1/8-mile squares. Each 1/8-mile square contains 10 acres and corresponds to a quarter of a quarter of a quarter section. A normal section of 1 square mile contains 8 rows of 1/8-mile squares; an odd-sized section contains more or fewer rows. Rows are numbered from east to west and lettered from south to north as shown in the diagram.

Example:

St. Clair County, FIP No. 163

T2N, R10W Section 23



The location of the well shown above is 163 2N10W-23.4c. The well point is located at the center of this 10-acre plot.

ILLINOIS STATE WATER SURVEY PRIVATE WELL DATABASE EXPLANATION

TWN RNG

TOWNSHIP RANGE SECTION

PL OWNER

SC

PLOT LOCATION WELL OWNER

DRILLER

WELL DRILLING CONTRACTOR OF WELL

DATE

DATE INITIALLY DRILLED

PERMIT

PERMIT CODE LETTER INDICATED AGENCY

WHICH ISSUED PERMIT #

 M - MINES AND MINERALS (After 1988 Only Observation Wells And Irrigation Wells)

P - PUBLIC HEALTH (All Non-Community Supplies)

E - EPA (Community Supplies)

N - NO FEE

X - UNDETERMINED

DEPTH REC DEPTH (Well To Nearest Ft)

RECORD TYPE (Types Of Information On File)

R - CONSTRUCTION REPORT

G - GEOLOGY S - SEALED

A - AFFIDAVIT

C - CHEMICAL ANALYSIS

I - INVENTORY

X - INDICATES COMMENT IN OWNERS FIELD SOMETHING UNUSUAL

O - ANY OTHER TYPE OF RECORD

US

WELL USE - A TWO LETTER CODE INDICATING

THE USAGE OF THE WELL

CO - CONSERVATION

CS - COMMUNITY SUPPLY

DO - DOMESTIC

DW - DE-WATERING

IC - INDUSTRIAL/COMMERCIAL

IR - IRRIGATION

MO - MONITORING

NC - NON-COMMUNITY

OB - OBSERVATION

PK - PARK

RC - RECOVERY WELL

RW - RELIEF WELL

Illinois State Water Survey PICS Database Page 1 Monday Nov 9 1998 14:31:01

Query the PICS Database through the World Wide Web http://gwinfo.sws.uiuc.edu/gwdb-query.html

County: Cook

Township Code: 40N Range Code: 14E

Section Codes: 28, 29, 30, 31, 32, 33

0 records were found for the specified locations.

Questions : Contact the Illinois State Water Survey's

Ground Water Division @ (217)333-7223

Publication: Please cite the Illinois State Water Survey's

PICS (Public-Industrial-Commercial) Database in all publications based wholly or partially

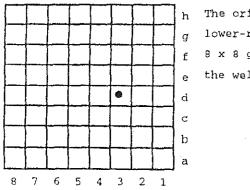
on this information.

Please Note:

The data in the PICS Database is a listing of municipal and large industrial and commercial wells which are known to the Illinois State Water Survey (ISWS). The information was initially entered from public water supply data and supplemented with the Illinois Water Inventory Project data. This database is updated as additional information is received and verified.

This data cannot be resold or redistributed. The Illinois State.
Water Survey must be acknowledged in any publication of this material.

Location of 10-acre-plot within a Section



The origin can be found at the lower-right-hand corner of an 8 x 8 grid. In this example, the well is in 10-acre plot 3d.

Query the PICS Database through the World Wide Web http://gwinfo.sws.uiuc.edu/gwdb-query.html

County: Cook

Township Code: 39N Range Code: 14E Section Codes: 4; 5, 6

0 records were found for the specified locations.

Questions : Contact the Illinois State Water Survey's

Ground Water Division @ (217)333-7223

Publication: Please cite the Illinois State Water Survey's

PICS (Public-Industrial-Commercial) Database in all publications based wholly or partially

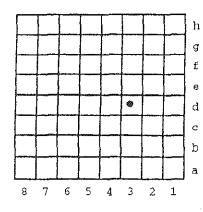
on this information.

Please Note:

The data in the PICS Database is a listing of municipal and large industrial and commercial wells which are known to the Illinois State Water Survey (ISWS). The information was initially entered from public water supply data and supplemented with the Illinois Water Inventory Project data. This database is updated as additional information is received and verified.

This data cannot be resold or redistributed. The Illinois State Water Survey must be acknowledged in any publication of this material.

Location of 10-acre-plot within a Section



h The origin can be found at the g lower-right-hand corner of an f 8 x 8 grid. In this example, e the well is in 10-acre plot 3d.

Illinois State Water Survey PICS Database Monday Nov 9 1998 14:31:01

Page 1

Query the PICS Database through the World Wide Web http://gwinfo.sws.uiuc.edu/gwdb-query.html

County: Cook

Township Code: 37N Range Code: 15ED

Section Codes: 5, 6, 7, 8

O records were found for the specified locations.

Questions : Contact the Illinois State Water Survey's

Ground Water Division @ (217)333-7223

Publication: Please cite the Illinois State Water Survey's

PICS (Public-Industrial-Commercial) Database in all publications based wholly or partially

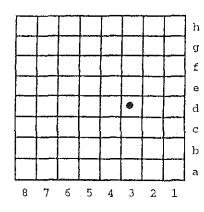
on this information.

Please Note:

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Location of 10-acre-plot within a Section



h The origin can be found at the g lower-right-hand corner of an f 8 x 8 grid. In this example, e the well is in 10-acre plot 3d.

Town Chicago Township Lake View R.14E company S. B. Geiger and Company T. Sec. Farm Birk Bros. Brewing Costo.

Authority S. B. Geiger and Co., Chicago Elevation 597 top. map 40 Collector

Confidential Date Drilled 1943
Appr. NW SE NW

No.	V # 2000 Strata	Thickness			Depth				
140.	6 # 3378 Strata	Feet	<u> In.</u>	Fe	et	ln.	: : : : : : : : : : : : : : : : : : : :		
	2117 N. Wayne Ave., indriv	eway	appr	OX.	150	8	:·		
	S. of Webster St.						: :		
	Drift	110		1	LO				
	Lime	315		425	5		: 1		
	Broken lime and shale	35		46	30				
	Shale	103		.56	33		:		
	Lime	332		89	95		-		
	St. Peter sand	260		11:	55		:		
	Blue shale	8		116	33		:		
	Lime	58		122	21		1		
	Very hard lime	9		123	30		1		
	Red marl	2		123	32		:		
	Lime	21		125	53				
	Cavey red marl	9	1	126	52		:		
	Hard sandy lime	26		128	38				
	Green shale	3		129)]		 		
	Sand	11		130)2	!			
	Green shale	2		130)4		:		
	Sand	21		132	25		:		
	Gray lime	30		135	55				
	Broken lime	15		137	70		•		
	Green shale	2		137			:		
	Gray lime	8		138					
	Sand	10		139					
	Red sand	13		140			,		
	Hard lime	15		14]		i .			
	Hard sand	32		145	50	ļ	;		
	Hard white sand	40		149		į			
	Soft white sand	6.		149					
	Hard white sand	4.		150	00	1			
	Soft white sand	75		157	75				
	Hard lime		·· <u> </u>	_16(00—	<u>:</u>	=		
CO	UNTY a				4	9-3			

COUNTY Cook

32-40N-14E

sheet 2 t. 40N R. 14E s. 32 company S. B. Geiger and Companyole No. FARM Birk Bros. Brewing Co. Hole No.

lo.	Strata	Thicks	1688	Depth		
	Strata	Feet	in.	Feat	J n	
	Casing record: 12" pipe to 110' 10" pipe from 417' to 570 8" pipe from 1141' to 12' 127' of 8" pipe, shoe on 8" hole to bottom	681	ad b	ottom		
	See file for M.V. Strantz Sample 1950.	Study	- 0	ctober 20	,	
	•					
i						

COOK COOK

32-40N-14E

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1981. 364228

ing Production (Special	HOHES I HOLAY		it digit
TOWN Chicago	TOWNSHIP	Map I	No.
COMPANY Birk Bro	No.	R.	A P
FARM 1325 Webst		T	Sec.
AUTHORITY P. MAIN	er Artesian We	79	7 2
ELEVATION	, Ca gg CC La Luca C.	T-Un	ےر
COLLECTOR OBA	DATE DRILLED .	N	
CONFIDENTIAL	MarSept	1202	
	mar = ch	, 1070	·

No.	Oc # 2 2 2 STRATA	i	ickness Depth			
<u></u>	100 35 19	Feet	In.	Feet	In.	
	Clay, sand and gravel Limestone Shale Limestone and other rock	40 282 253		40 322 575		
	kind not specified	1132	9	1609	9	
	en en en en en en en en en en en en en e	-		-		
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County GOOK T.—DRILL RECORD Index No.

1132

COPYING ORDER FOR GEOL	OGICA!	L RECORDS			ISGS	invoice numi		PC	\mathcal{D}^{C}	GRI	J order	numbe	r .	5.)	(.6
Name Janice Smi Company (PT En	viro	innestal	Services		COPYING CHAR Geophysical logs Geophysical logs	/\$5.00 each	up to 600	0 h)	-	Amo	unt			Co	st
St. address 799 Roose P.O. box Eldy, 6 Town Glen Ellyn	velī Su IL	t Kd ite 110 . zip 601	37 Phone 630-469-6	3to	Parts of logs and/o Single sheets / \$.0 Total copying cost Shipping charges,	0.35 each			0.50 pe	at order	<u> </u>			, <u>s</u>	5
REMARKS Wate-				1 102	TOTAL CHARGE *For orders e Example: Fo	S exceeding \$5	0, add 10%	o for th	e first \$	550 and	5% for (the am (\$10).	ount a	ver \$5	35
Sorry, Janice, I Your area with	coule	I not find	a map of	Phone Fax	\mathcal{X}_{-}		Received b	y <u>/</u>	310	et			ale /	ĵ-)	(- <u>`</u>)C
your area with	Sec	tion lines	Clearly Clisplayed	In personal	on ,		TD	e folder	- wireline	Driller's log Comp. rep.	Plugging Sample of the	g time	nary sheet	тар.	eb.
County T-R	S	Qtrs.	Operator		Well name	Year	Permit number	Entire	E-log Other	Oriller	Plugg	Onillin	Sumn	Well drig.	Geol.rep.
ask 40NH4E	37												χ -		
37NH E	5					(χ		
	6														
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i i													_		
	<u> </u>											_ _			



Illinois State Water Survey

Main Office • 2204 Griffith Drive • Champaign, IL 61820-7495 • Tel (217) 333-2210 • Fax (217) 333-6540

Pearla Office • P.O. Box 697 • Pearla, IL 61652-0697 • Tel (309) 671-3196 • Fax (309) 671-3106



Ground-Water Section • Tel (217) 333-4300 • Fax (217) 244-0777

October 10, 2000

Ms. Janice Smith Continental Placer 799 Roosevelt Road, Suite 110 Glen Ellyn, IL 60137

Dear Ms. Smith:

As you requested during our telephone conversation on October 5, we are enclosing printouts from our Private Well and Public, Industrial, Commercial Survey (PICS) Databases for the following locations in Cook County:

Township	<u>Range</u>	<u>Sections</u>
37 North	15 East	5, 6
40 North	14 East	31,32

No available information is indicated on the printout by the statement "0 records were found for the specified locations." Also enclosed are explanations of the Illinois State Water Survey Private Well and PICS Databases.

The data included in the Private Well Database are those non-municipal wells which are known to the Illinois State Water Survey, and the PICS Database is an inventory of municipal well information and large industrial ground-water users. We may not have a copy of well records for these ground-water users.

The invoice accompanying this request covers the \$20.00 query fee for private well information, \$20.00 query fee for PICS information, and a \$0.10 per page charge for 6 pages, plus a \$5.00 shipping and handling fee, totaling \$45.60.

If you have any questions or if we can be of further assistance, please call.

Sincerely,

Susie Dodd-Casey

Assistant Supportive Scientist

Dodd - Casey

Ground-Water Section Phone: (217) 333-9043

sdc/psh

Enclosures

Illinois State Water Survey PICS Database Tuesday, October 10, 2000 9:21

County:

COOK

Township:

40n

Range:

14e

Sections:

31,32

-

[0] records found for this collection

Questions:

Contact the Illinois State Water Survey's Ground Water Division @217-333-9043

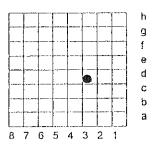
Publication:

Please cite the Illinois State Water Survey's PICS (Public-Industrial-Commercial)

Database in all publications based wholly or partially on this information.

Note: The data in the PICS Database is a listing of municipal and commercial wells which are known to the Illinois State Water Survey(ISWS). This information was initially entered from public water supply data and supplemented with the Illinois Water Inventory Project data. This database is updated as additional information is received and verified.

This data cannot be resold or redistributed. The Illinois State Water Survey must be acknowledged in any use of this material.



Location of a 10-acre-plot within a section:

The origin can be found at the lower right-hand-corner of an 8 x 8 grid. In this example, the well is in the 10-acre-plot '3d'.

Illinois State Water Surv. NDB Database Tuesday, October 10, __000 9:21

County: COOK
Township: 40n
Range: 14e
Sections: 31,32

Township: 15 records found for this collection
Questions: Contact the Illinois State Water Survey's Ground Water Division @217-333-9043

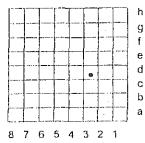
Publication:

Please cite the Illinois State Water Survey's Private Well Database in all publications

based wholly or partially on this information.

Note: The data in the Private Well Inventory Database is a listing of those non-municipal wells which are known to the Illinois State Water Survey (ISWS). This information has been entered verbatim from well logs submitted by the driller, chemical analysis reports, well sealing forms, well inventory forms from the 1930-1934 well survey, and other special projects. The accuracy of this data is controlled by those submitting the forms. Information in the private well database has not been verified.

This data cannot be resold or redistributed. The Illinois State Water Survey must be acknowledged in any use of this material.



Location of a 10-acre-plot within a section:

The origin can be found at the lower right-hand-corner of an 8 x 8 grid. In this example, the well is in the 10-acre plot '3d'.



APPENDIX D

WATER WELL SEALING FORM

Address

ILLINOIS DEPARTMENT OF PUBLIC HEALTH DIVISION OF ENVIRONMENTAL HEALTH 525 W. JEFFERSON ST.

SPRINGFIELD, IL 62761

WATER WELL SEALING FORM

RETURNALL COPIES TO IDPH OR

TYPE	OR PRESS FIRMLY		LOCAL HE	ALTH DEPARTMENT
monit requir	orm shall be submitted to this Department or the local oring well is scaled. Such wells are to be scaled not mo ements in the Water Well Construction Code. THE LORTMENT MUST BE NOTIFIED AT LEAST 48 HO	re than 30 days after the OCAL HEALTH DEPA	ey are abandoned in ac RTMENT OR REGIO	cordance with the sealing NALPUBLIC HEALTH
1.	Ownership (Name of Controlling Party)	Metal Ma	nnagement Midwest. Inc	·
2.	Well Location 1509 West Cortland Street		Chicago	Cook
	Address - Lot Number		City	County
•	General Description Township 40N (N)(S) Range 13E	(E)(W)	Section 32
	NW Quarter of the NW	Quarter of the SW	Quarter	
3.	Year Drilled 2000			
4.	Drilling Permit Number (and date, if known) No	ot Applicable	-	
5.	Type of Well Bored Drilled X	Other		
6.	Total Depth 25 Feet Diam	eter (inches) 2 inches	i	
7.	Formation clear of obstruction X Yes	No		
8.	DETAILS OF PLUGGING			·
	Filled with Concrete (cement or other materials)	from0	to 1 ft.	
	Kind of plug Bentonite chips	from 1	to5ft.	
	Filled with Filter Sand	from 5	to25ft.	
	Kind of plug	from	toft.	
	Filled with	from	toft,	
	Kind of plug	from	toft.	
9.	CASING RECORD Upper 2 feet of casing remove	d X Yes	No	
10.	Date well was sealed Month April Da	y 25 Year	2002	·
11.	Licensed water well driller or other person approve	ed by the Department p	erforming well sealing.	
	GeoServe			
	Name	Complete Licen	se Number	
	18020 O'Clock Road	Union	IL/	60180

This state agency is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under Public Act 85-0863. Disclosure of this information is mandatory. This form has been approved by the Forms Management Center. IL 482-0631

City

State/ZIP

APPENDIX E

LABORATOY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY FORM



First Environmental Laboratories, Inc.

1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233 IEPA Certification #100292

May 8, 2002

Ms. Sarah Schlichtholz CONTINENTAL PLACER, INC. 799 Roosevelt Road, 6-110 Glen Ellyn, IL 60137

Project ID: E05-74-06-249

First Environmental File ID: 57155-61

Date Received: April 30, 2002

Dear Ms. Schlichtholz:

The above referenced samples were analyzed as requested on the enclosed chain of custody record.

PROJECT SUMMARY

Analyses were performed in accordance with the methods found in the USEPA publication: <u>Test Methods</u> for <u>Evaluating Solid Waste</u>, <u>Physical/Chemical Methods</u>, SW-846, 3rd Edition, December 1996. Specific method references are listed on the Analytical Report.

QA/QC documentation and raw data will remain on file for future reference.

I thank you for the opportunity to be of service and look forward to working with you again in the future. Should you have any questions regarding the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

William H. Mottashed

Project Manager

Mollers



1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233 IEPA Certification #100292

Analytical Report

Client:

CPI ENVIRONMENTAL SERVICES, INC.

Project ID:

E05-74-06-249

Date Received:

< 0.50

ug/L

04/30/02

Sample Number:

57155

Date Taken:

04/29/02

Sample Description: MW6

Aroclor 1260

Time Taken:

1105

Lab File ID:

57155-61

Date Reported:

05/08/02

•	Kesult	Units	Flags
C/8082			
05/06/02			
05/08/02			
	< 0.50	ug/L	÷
	05/06/02	C/8082 05/06/02 05/08/02 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50	C/8082 05/06/02 05/08/02 < 0.50

Analyte	Result	Units	Date Analyzed	Method
Dissolved Metals				
Arsenic	< 0.002	mg/L	05/06/02	3010A/6010B
Barium	0.047	mg/L	05/06/02	3010A/6010B
Cadmium	< 0.001	mg/L	05/06/02	3010A/6010B
Chromium	< 0.001	mg/L	05/06/02	3010A/6010B
Chromium, hexavalen	< 0.005	mg/L	05/01/02	7196A
Chromium, trivalent	< 0.005	mg/L	05/06/02	3010A/6010B
Lead	< 0.002	mg/L	05/06/02	3010A/6010B
Mercury	< 0.0005	mg/L	05/02/02	7470A
Selenium	< 0.002	mg/L	05/06/02	3010A/6010B
Silver	< 0.001	mg/L	05/06/02	3010A/6010B



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Analytical Report

Client:

CPI ENVIRONMENTAL SERVICES, INC.

Project ID:

E05-74-06-249

Sample Number:

57157

Aroclor 1260

Sample Description: MW7 Lab File ID:

57155-61

Date Received:

04/30/02

Date Taken: Time Taken:

< 0.50

ug/L

04/29/02 1430

Date Reported:

05/08/02

Analyte		Result	Units	Flags
PCBs Method 3510	OC/8082			
Preparation Date:	05/06/02			
Analysis Date:	05/08/02			
Aroclor 1016		< 0.50	ug/L	
Aroclor 1221		< 0.50	ug/L	
Aroclor 1232		< 0.50	ug/L	
Aroclor 1242		< 0.50	ug/L	
Aroclor 1248		< 0.50	ug/L	
Aroclor 1254		< 0.50	ug/L	

Analyte	Result	Units	Date Analyzed	Method
Dissolved Metals				
Arsenic	0.004	mg/L	05/06/02	3010A/6010B
Barium	0.082	mg/L	05/06/02	3010A/6010B
Cadmium	< 0.001	mg/L	05/06/02	3010A/6010B
Chromium	< 0.001	mg/L	05/06/02	3010A/6010B
Chromium, hexavalen	< 0.005	mg/L	05/01/02	7196A
Chromium, trivalent	< 0.005	mg/L	05/06/02	3010A/6010B
Lead	< 0.002	mg/L	05/06/02	3010A/6010B
Mercury	< 0.0005	mg/L	05/02/02	7470A
Selenium	< 0.002	mg/L	05/06/02	3010A/6010B
Silver	< 0.001	mg/L	05/06/02	3010A/6010B



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Analytical Report

Client:

CPI ENVIRONMENTAL SERVICES, INC.

Project ID: Sample Number: E05-74-06-249

57158

Date Received:

Date Reported:

Result

Date Taken: Time Taken:

Units

1500 05/08/02

04/30/02

04/29/02

Flags

Sample Description: MW8 Lab File ID:

57155-61

Analyte Volatile Organic Compounds Method 5030B/8260B

Analysis Date:

05/04/02

A	100	/T
Acetone	< 10.0	ug/L
Benzene	< 5.0	ug/L
2-Butanone	< 10.0	ug/L
Carbon disulfide	< 5.0	ug/L
Chloroform	< 1.0	ug/L
Chloromethane	< 10.0	ug/L
1,1-Dichloroethane	< 5.0	ug/L
cis-1,2-Dichloroethene	< 5.0	ug/L
Ethyl benzene	< 5.0	ug/L
Tetrachloroethene	< 5.0	ug/L
Toluene	< 5.0	ug/L
1,1,1-Trichloroethane	< 5.0	ug/L
Trichloroethene	< 5.0	ug/L
Vinyl Chloride	< 2.0	ug/L
Xylenes (total)	< 5.0	ug/L

Base-Neutral/Acid Compounds Method 3510C/8270C

Preparation Date:

05/06/02

Analysis Date:

05/06/02

Analysis Date. 05/00/02		
bis(2-ethylhexyl)phthalate	< 10	ug/L
Butylbenzylphthalate	< 10	ug/L
4-Chloro-3-methylphenol	< 20	ug/L
Dibenzofuran	< 10	ug/L
2,4-Dimethylphenol	< 10	ug/L
Di-n-butylphthalate	< 10	ug/L
Di-n-octylphthalate	< 10	ug/L
2-Methylnaphthalene	< 10	ug/L
3&4-Methylphenol	< 10	ug/L
Naphthalene	< 10	ug/L
Phenol	< 10	ug/L
1,2,4-Trichlorobenzene	< 10	ug/L



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Analytical Report

Client:

CPI ENVIRONMENTAL SERVICES, INC.

Project ID:

E05-74-06-249

Sample Number: Sample Description: MW8

57158

Lab File ID:

57155-61

Date Received:

Date Taken:

04/30/02 04/29/02

Time Taken: 1500 Date Reported:

05/08/02

Analyte	Result	Units	Flags
Polynuclear Aromatic Compounds Methodology Preparation Date 05/06/02 Analysis Date: 05/07/02	d 3510C/8270C		
Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo[a]anthracene Chrysene Benzo[b]fluoranthene Benzo[k]fluoranthene Benzo[a]pyrene Indeno[1,2,3-cd]pyrene Dibenz[a,h]anthracene Benzo[g,h,i]perylene	< 10 < 10 < 2 < 5 < 5 < 2 < 0.13 < 1.5 < 0.18 < 0.17 < 0.2 < 0.3 < 0.4	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	
PCBs Method 3510C/8082 Preparation Date: 05/06/02 Analysis Date: 05/08/02			
Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260	< 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	

Analyte	Result	Units	Date Analyzed	Method
Dissolved Metals				
Arsenic	0.004	mg/L	05/06/02	3010A/6010B
Barium	0.032	mg/L	05/06/02	3010A/6010B
Cadmium	< 0.001	mg/L	05/06/02	3010A/6010B
Chromium	< 0.001	mg/L	05/06/02	3010A/6010B
Chromium, hexavalen	< 0.005	mg/L	05/01/02	7196A
Chromium, trivalent	< 0.005	mg/L	05/06/02	3010A/6010B
Lead	< 0.002	mg/L	05/06/02	3010A/6010B
Mercury	< 0.0005	mg/L	05/02/02	7470A
Selenium	< 0.002	mg/L	05/06/02	3010A/6010B
Silver	< 0.001	mg/L	05/06/02	3010A/6010B



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Analytical Report

Client:

CPI ENVIRONMENTAL SERVICES, INC.

Project ID:

E05-74-06-249

Date Received: Date Taken:

04/30/02

Sample Number: Sample Description: MW9

57156

Time Taken:

04/29/02

Flags

Lab File ID:

57155-61

Date Reported:

Result

1405 05/08/02

Units

Analyte Volatile Organic Compounds Method 5030B/8260B

Analysis Date:

05/04/02

Acetone	< 10.0	ug/L
Benzene	< 5.0	ug/L
2-Butanone	< 10.0	ug/L
Carbon disulfide	< 5.0	ug/L
Chloroform	< 1.0	ug/L
Chloromethane	< 10.0	ug/L
1,1-Dichloroethane	< 5.0	ug/L
cis-1,2-Dichloroethene	< 5.0	ug/L
Ethyl benzene	< 5.0	ug/L
Tetrachloroethene	< 5.0	ug/L
Toluene	< 5.0	ug/L
1,1,1-Trichloroethane	< 5.0	ug/L
Trichloroethene	< 5.0	ug/L
Vinyl Chloride	< 2.0	ug/L
Xylenes (total)	< 5.0	ug/L

Base-Neutral/Acid Compounds Method 3510C/8270C

Preparation Date:

05/06/02

Analysis Date:

05/06/02

•		
bis(2-ethylhexyl)phthalate	< 10	ug/L
Butylbenzylphthalate	< 10	ug/L
4-Chloro-3-methylphenol	< 20	ug/L
Dibenzofuran	< 10	ug/L
2,4-Dimethylphenol	< 10	ug/L
Di-n-butylphthalate	< 10	ug/L
Di-n-octylphthalate	< 10	ug/L
2-Methylnaphthalene	< 10	ug/L
3&4-Methylphenol	< 10	ug/L
Naphthalene	< 10	ug/L
Phenol	< 10	ug/L
1,2,4-Trichlorobenzene	< 10	ug/L



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Analytical Report

Client:

CPI ENVIRONMENTAL SERVICES, INC.

Project ID: Sample Number: Sample Description:

Lab File ID:

E05-74-06-249 57156 MW9 57155-61 Date Received: Date Taken:

04/30/02 04/29/02

Time Taken:
Date Reported:

1405 05/08/02

Analyte	•	Result	Units	Flags
Polynuclear Aroma Preparation Date Analysis Date:	tic Compounds Method 35: 05/06/02 05/07/02	10C/8 27 0C		
Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo[a]anthracene Chrysene Benzo[b]fluoranthene Benzo[k]fluoranthene Benzo[a]pyrene Indeno[1,2,3-cd]pyre Dibenz[a,h]anthracer Benzo[g,h,i]perylene	ne	< 10 < 10 < 2 < 5 < 5 < 2 < 0.13 < 1.5 < 0.18 < 0.17 < 0.2 < 0.3 < 0.3 < 0.4	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	
PCBs Method 35106 Preparation Date: Analysis Date: Aroclor 1016 Aroclor 1221	C/ 8082 05/06/02 05/08/02	< 0.50 < 0.50	ug/L ug/L	
Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260		< 0.50 < 0.50 < 0.50 < 0.50 < 0.50	ug/L ug/L ug/L ug/L ug/L	

Analyte	Result	Units	Date Analyzed	Method
Dissolved Metals				
Arsenic	0.008	mg/L	05/06/02	3010A/6010B
Barium	0.249	mg/L	05/06/02	3010A/6010B
Cadmium	< 0.001	mg/L	05/06/02	3010A/6010B
Chromium	0.002	mg/L	05/06/02	3010A/6010B
Chromium, hexavalen	< 0.005	mg/L	05/01/02	7196A
Chromium, trivalent	< 0.005	mg/L	05/06/02	3010A/6010B
Lead	< 0.002	mg/L	05/06/02	3010A/6010B
Mercury	< 0.0005	mg/L	05/02/02	7470A
Selenium	< 0.002	mg/L	05/06/02	3010A/6010B
Silver	< 0.001	mg/L	05/06/02	3010A/6010B



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Analytical Report

Client:

CPI ENVIRONMENTAL SERVICES, INC.

Project ID:

E05-74-06-249

Date Received:

Result

04/30/02

Sample Number: Sample Description: MW10

57159

Date Taken:

04/29/02 1530

Lab File ID:

57155-61

Time Taken: Date Reported:

Units

05/08/02

Flags

Volatile Organic Compounds Method 5030B/8260B

Analysis Date:

Analyte

05/04/02

y		
Acetone	< 10.0	ug/L
Benzene	< 5.0	ug/L
2-Butanone	< 10.0	ug/L
Carbon disulfide	< 5.0	ug/L
Chloroform	< 1.0	ug/L
Chloromethane	< 10.0	ug/L
1,1-Dichloroethane	< 5.0	ug/L
cis-1,2-Dichloroethene	< 5.0	ug/L
Ethyl benzene	< 5.0	ug/L
Tetrachloroethene	< 5.0	ug/L
Toluene	< 5.0	ug/L
1,1,1-Trichloroethane	< 5.0	ug/L
Trichloroethene	< 5.0	ug/L
Vinyl Chloride	< 2.0	ug/L
Xylenes (total)	< 5.0	ug/L

Base-Neutral/Acid Compounds Method 3510C/8270C

Preparation Date:

05/06/02

Analysis Date: 0	5/06/02		
bis(2-ethylhexyl)phthala	ate	< 10	ug/L
Butylbenzylphthalate		. < 10	ug/L
4-Chloro-3-methylphen	.ol	< 20	ug/L
Dibenzofuran		< 10	ug/L
2,4-Dimethylphenol		< 10	ug/L
Di-n-butylphthalate		< 10	ug/L
Di-n-octylphthalate		< 10	ug/L
2-Methylnaphthalene		< 10	ug/L
3&4-Methylphenol		< 10	ug/L
Naphthalene		< 10	ug/L
Phenol		< 10	ug/L
1.2.4-Trichlorobenzene		< 10	ug/L



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Analytical Report

Client:

CPI ENVIRONMENTAL SERVICES, INC.

Project ID:

Lab File ID:

E05-74-06-249

Sample Number: 57159 Sample Description: MW10

Aroclor 1260

57155-61

Date Received:

04/30/02 Date Taken: 04/29/02

Time Taken: Date Reported:

1.530 05/08/02

Analyte	Result	Units	Flags
Polynuclear Aromatic Compounds Meth Preparation Date 05/06/02 Analysis Date: 05/07/02	od 3510C/8270C		N
Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo[a]anthracene Chrysene Benzo[b]fluoranthene Benzo[k]fluoranthene Benzo[a]pyrene Indeno[1,2,3-cd]pyrene Dibenz[a,h]anthracene Benzo[g,h,i]perylene	< 10 < 10 < 2 < 5 < 5 < 2 < 0.13 < 1.5 < 0.18 < 0.17 < 0.2 < 0.3 < 0.4	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	
PCBs Method 3510C/8082 Preparation Date: 05/06/02 Analysis Date: 05/08/02			
Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254	< 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50	ug/L ug/L ug/L ug/L ug/L ug/L	

< 0.50

ug/L

Analyte	Result	Units	Date Analyzed	Method
Dissolved Metals				
Arsenic	< 0.002	mg/L	05/06/02	3010A/6010B
Barium	0.025	mg/L	05/06/02	3010A/6010B
Cadmium	< 0.001	mg/L	05/06/02	3010A/6010B
Chromium	< 0.001	mg/L	05/06/02	3010A/6010B
Chromium, hexavalen	< 0.005	mg/L	05/01/02	7196A
Chromium, trivalent	< 0.005	mg/L	05/06/02	3010A/6010B
Lead	< 0.002	mg/L	05/06/02	3010A/6010B
Mercury	< 0.0005	mg/L	05/02/02	7470A
Selenium	< 0.002	mg/L	05/06/02	3010A/6010B
Silver	< 0.001	mg/L	05/06/02	3010A/6010B



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Analytical Report

Client:

CPI ENVIRONMENTAL SERVICES, INC.

Project ID: Sample Number: 5716 Sample Description: Dup

Lab File ID:

E05-74-06-249

57160

Date Received: Date Taken:

04/30/02 04/29/02

57155-61

Time Taken: Date Reported:

1600 05/08/02

Analyte	Result	Units	Flags
Volatile Organic Compounds Method 5030B/820 Analysis Date: 05/04/02	60B		
Acetone Benzene 2-Butanone Carbon disulfide Chloroform Chloromethane 1,1-Dichloroethane cis-1,2-Dichloroethene Ethyl benzene Tetrachloroethene Toluene 1,1,1-Trichloroethane Trichloroethene Vinyl Chloride Xylenes (total)	< 10.0 < 5.0 < 10.0 < 5.0 < 1.0 < 10.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	
Base-Neutral/Acid Compounds Method 3510C/8 Preparation Date: 05/06/02 Analysis Date: 05/06/02	270C		
bis(2-ethylhexyl)phthalate Butylbenzylphthalate 4-Chloro-3-methylphenol Dibenzofuran 2,4-Dimethylphenol Di-n-butylphthalate Di-n-octylphthalate 2-Methylnaphthalene 3&4-Methylphenol Naphthalene Phenol 1,2,4-Trichlorobenzene	< 10 < 10 < 20 < 10 < 10 < 10 < 10 < 10 < 10 < 10 < 1	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	



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Analytical Report

Client:

CPI ENVIRONMENTAL SERVICES, INC.

Project ID: Sample Number: E05-74-06-249

57160

Date Received: Date Taken:

04/30/02 04/29/02

Sample Description: Lab File ID:

Dup 57155-61

Time Taken: Date Reported:

Units

1600 05/08/02

Flags

Analyte Result Polynuclear Aromatic Compounds Method 3510C/8270C

Preparation Date Analysis Date:

05/06/02

05/07/02

Acenaphthylene	< 10	ug/L
Acenaphthene	< 10	ug/L
Fluorene	< 2	ug/L
Phenanthrene	< 5	ug/L
Anthracene	< 5	ug/L
Fluoranthene	< 2	ug/L
Pyrene	< 2	ug/L
Benzo[a]anthracene	< 0.13	ug/L
Chrysene	< 1.5	ug/L
Benzo[b]fluoranthene	< 0.18	ug/L
Benzo[k]fluoranthene	< 0.17	ug/L
Benzo[a]pyrene	< 0.2	ug/L
Indeno[1,2,3-cd]pyrene	< 0.3	ug/L
Dibenz[a,h]anthracene	< 0.3	ug/L
Benzo[g,h,i]perylene	< 0.4	ug/L

PCBs Method 3510C/8082

Preparation Date:

05/06/02

Analysis Date:

05/08/02

Aroclor 1016	< 0.50	ug/L
Aroclor 1221	< 0.50	ug/L
Aroclor 1232	< 0.50	ug/L
Aroclor 1242	< 0.50	ug/L
Aroclor 1248	< 0.50	ug/L
Aroclor 1254	< 0.50	ug/L
Aroclor 1260	< 0.50	ug/L

Analyte	Result	Units	Date Analyzed	Method
Dissolved Metals				
Arsenic	0.003	mg/L	05/06/02	3010A/6010B
Barium	0.025	mg/L	05/06/02	3010A/6010B
Cadmium	< 0.001	mg/L	05/06/02	3010A/6010B
Chromium	< 0.001	mg/L	05/06/02	3010A/6010B
Chromium, hexavalen	< 0.005	mg/L	05/01/02	7196A
Chromium, trivalent	< 0.005	mg/L	05/06/02	3010A/6010B
Lead	< 0.002	mg/L	05/06/02	3010A/6010B
Mercury	< 0.0005	mg/L	05/02/02	7470A
Selenium	< 0.002	mg/L	05/06/02	3010A/6010B
Silver	< 0.001	mg/L	05/06/02	3010A/6010B



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Analytical Report

Client:

CPI ENVIRONMENTAL SERVICES, INC.

Project ID:

E05-74-06-249

Sample Number: Sample Description:

57161 Trip Blank

Lab File ID: 57155-61 Date Received:

04/30/02 Date Taken: Time Taken:

04/29/02 1605 Date Reported: 05/08/02

Flags

Result Analyte Units

Volatile Organic Compounds Method 5030B/8260B

Analysis Date:

05/04/02

7 Hidly 515 Date. 0510 W 02		
Acetone	< 10.0	ug/L
Benzene	< 5.0	ug/L
2-Butanone	< 10.0	ug/L
Carbon disulfide	< 5.0	ug/L
Chloroform	< 1.0	ug/L
Chloromethane	< 10.0	ug/L
1,1-Dichloroethane	< 5.0	ug/L
cis-1,2-Dichloroethene	< 5.0	ug/L
Ethyl benzene	< 5.0	ug/L
Tetrachloroethene	< 5.0	ug/L
Toluene	< 5.0	ug/L
1,1,1-Trichloroethane	< 5.0	ug/L
Trichloroethene	< 5.0	ug/L
Vinyl Chloride	< 2.0	ug/L
Xvlenes (total)	< 5.0	пσ/Г,

CHAIN OF CU DY RECORD



	ux; (630) 778-1233		Ad Pho Co:	me: dress: one: ntact Na npled B	ime:	^\ \.	199 146 146	1-6: d Bru	eve1+ 340	Ra		tate	Zip	
Matrix Codos: S = So	oil W = Water O = Other		•	\$\\c\c	30/2	1 1 S	37		/ /					
Date/Time Taken	Sample Description	Matrix	<u> </u>		<u></u>	Ana	Z/ lyses				Cor	nments		Lah I.D.
4/29/02/ 1105	MWG	W			Х	Х						-		57155
4/29/02 1405	MN9	W	Х	X	×	X								156
4/29/02 1430	MWT	W			Х	X								157
4/24/02 180	MW 8	W	Х	×	X	X								150
7/29/02/530	MW 10	W	X	×	X	×								154
4/24/02 1600	Dup	W	X	×	X	×								160
4129/02 1605	Trip Blank	W	X											161
												······		
Sample Acceptance Crit		(exception	on note	ed belo	w)						ature: n 6 hrs. of	Ce- collection:	2.6	
Condition														
Chemical Preservation														
Thermal Preservation _					Not	tes and	Special	Instruction	ons:					
Holding Time					*	Pleas	e fil	ta pri	or to	analysi	, (AS, E	Ba, Cd,	Cz, Pb.	Hg, Se, AS
	1111				<u>*</u>	See	atiac	Kil di	س					Hg, Se, Ag
Relinquished By	Agricaliz Date	Time 4/-30	102	12.	it me	ccived E	3y:	1)	:	Date/Ti	ime4-3	13-62	1220
Relinquished By:	Date/	Time			Re	ccived-E	\$. T.	<u> </u>	,		Date/Ti	me		

COMPREHENSIVE SITE INVESTIGATION REPORT (VOLUME 1 OF 2)

Cometco Corporation 1509 West Cortland Street Chicago, Illinois 60622

RECEIVED
JUN 2 9 2001
IEPA/BOI

Prepared for:

Metal Management Midwest, Inc. 12701 South Doty Avenue Chicago, IL 60633



Prepared by:

CPI Environmental Services, Inc.

799 Roosevelt Road Building 6, Suite 110 Glen Ellyn, Illinois 60137

CPI Project No. E-05-73-01-199

June 6, 2001

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FOREWORD

Retained by Metal Management Midwest Inc. (MMMI), CPI Environmental Services Inc. (CPI) has concluded environmental assessments of property owned by MMMI and referred to as Cometco Corp. located at 1509 Cortland Street in Chicago, Illinois (subject property). In anticipation of divestiture with possible entry into Illinois Environmental Protection Agency's (IEPA) Site Remediation Program (SRP), investigations and evaluations have been conducted in accordance with Title 35 Illinois Administrative Code (IAC) Part 740.

This report has been prepared consistent with requirements for comprehensive site investigations outlined in 35 IAC Part 740.425 and represents a compilation of current and previous environmental assessments conducted at the subject property. Included within this report is a presentation of assessment activities, results obtained from investigations, and an endangerment assessment pursuant to 35 IAC Part 740.425(b)(5) prepared using the Tiered Approach to Corrective Action Objectives (TACO) analysis in accordance with current requirements pursuant to 35 IAC Part 742.

1.0 EXECUTIVE SUMMARY

1.1 Project Objectives

The objectives of site investigations performed at the subject property were to evaluate potential recognized environmental conditions identified in the Phase I Environmental Site Assessment (Phase I) as discussed in Section 2.3.3, to characterize overall subject property soil quality, and to evaluate the risk to human health posed by identified environmental conditions.

1.2 Technical Approach

CPI implemented an intrusive study of soil conditions that included sampling and analytical testing throughout identified areas of concern. Investigations were conducted in accordance with the Illinois Environmental Protection Agency (IEPA) Site Remediation Program (SRP) regulations detailed in Title 35 Illinois Administrative Code (IAC) Part 740. Sample locations were selected to evaluate potential recognized environmental conditions identified in the Phase I assessment and to characterize overall subject property soil quality. Samples were collected from fill material and underlying silty clay and analyzed for contaminants of concern defined as volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total RCRA metals, and polychlorinated biphenyls (PCBs). Additional analyses including soil pH, total organic carbon, grain-size analysis, and hydraulic conductivity were performed to establish site-specific conditions. Analytical results obtained during previous intrusive investigations, as listed in Section 2.3, are included in overall site evaluations.

Evaluation of risk was conducted by comparing concentrations of contaminants of concern to the Tier 1 soil remediation objectives (SROs) in accordance with 35 IAC Part 742, Tiered Approach to Corrective Action Objectives (TACO) and by evaluating exposure pathways in accordance with 35 IAC Part 742 Subpart C, Parts 300 to 320. Exposure routes included in the evaluation

are inhalation exposure route, soil ingestion exposure route, and groundwater ingestion exposure route as they apply to potential receptor populations.

1.3 Summary of Investigative Findings and Tier 1 Evaluation

Investigations have revealed historical industrial use of the subject property has resulted in impact to fill material in operational areas throughout the subject property. A Tier 1 evaluation pursuant to TACO indicates that polynuclear aromatic (PNA) hydrocarbons, polychlorinated biphenyls (PCBs), lead, arsenic, benzene, vinyl chloride, and petroleum hydrocarbons are present in fill material such that remedial action and/or engineered barriers are recommended to provide for adequate protection of potential receptor populations. To follow is a summary of investigative findings:

- Characterization has shown contaminants of concern to be confined to fill material with no significant impact to underlying native silty clay material.
- Fill material is consistent with fill material found throughout the City of Chicago. The occurrence of PNAs exceeding Tier 1 SROs in fill material is common in material found throughout the City of Chicago and likely is inherent to material used to fill the property.
- The occurrence of elevated metals (i.e., lead and arsenic) and PCBs in fill material is attributed to storing and processing scrap metal at the subject property and appears confined to former and current storage and processing areas.
- Vinyl chloride concentrations are present in fill material north of the stormwater pond.
- Benzene is present at elevated concentrations south of the Maintenance Office and likely is associated with former USTs removed from this area.
- Petroleum hydrocarbons are present in fill material near the baler and north of the stormwater retention pond, and in sediments and water within the lined stormwater pond.
 Presence of oily material in these areas presents potential source areas that will prevent

exclusion of exposure pathways unless corrective action is taken to eliminate potential free-product.

• Investigations have revealed no impact to groundwater as a result of the presence of contaminants of concern at the subject property.

To follow is a summary of exposure route evaluations:

- Evaluations have shown potentially exposed populations are limited to industrial/commercial and construction workers who may disturb site soil, as discussed in Section 6.2.2 and 6.2.3.
- The groundwater exposure route can be eliminated and no further evaluation of this exposure route is required, as discussed in Section 6.2.4.
- Prior to pursuing elimination of exposure routes, corrective measures in the vicinity of the baler and stormwater pond are recommended to eliminate potential contaminant sources and potential free product observed in these areas, as discussed in Section 6.2.1.
- Unless future redevelopment activities include implementation and maintenance of institutional controls and/or engineered barriers, the soil inhalation and ingestion exposure routes for industrial-commercial and construction workers cannot be excluded from further consideration since contaminants of concern are present in excess of Tier 1 soil remediation objectives, as presented in the following table and discussed in Section 6.3:

C- 1 1 C	Industrial-Commercial Worker		Construction Worker	
Contaminant of Concern	Ingestion	Inhalation	Ingestion	Inhalation
Vinyl Chloride				
Benzene				
PCBs	自然基础管理 化基础			.=-
Benzo(a)anthracene			To the Character of the second	
Benzo(b)fluoranthene		·		
Benzo(b)pyrene				
Dibenzo(a,h)anthracene		*-		
Indeno(1,2,3-cd)pyrene				
Arsenic				
Lead	40年1月1日			

NOTES:

1.4 Assumptions

Conclusion expressed in this report are based on the following assumptions:

- Property use will remain as industrial-commercial upon divestiture, which shall require implementation of land-use restrictions.
- Existing engineered barriers will be eliminated during redevelopment of the subject property.
- Property use will remain classified as "high occupancy" as defined in 40 CFR 761.61 for purposes of establishing PCB remediation objectives.
- Homogeneous vertical distribution of contaminants of concern in fill material at each discrete sampling location is assumed; due to heterogeneity of fill material, no attempt to delineate impacted horizons of fill material was made.
- For purposes of calculations, "below detection limit" results were included as one-half of the reported analytical detection limit for the contaminant pursuant to 35 IAC Part 742.225(e).

⁼ Contaminant of concern exceeds Ticr 1 SRO established for exposure pathway

⁼ No Tier 1 Soil Remediation Objective Established for pathway

2.0 SUBJECT PROPERTY CHARACTERIZATION

2.1 Subject Property Description

The subject property is located at 1509 West Cortland Street, in Chicago, Illinois, Section 32, Township 40 North, Range 14 East of the third Principal Meridian, in Cook County. A topographic map showing the location of the subject property is provided as Figure 1.

Currently, the subject property is utilized as a scrap metal recycling facility. The facility serves primarily as a feeder yard to other MMMI facilities located in Chicago. Loading, unloading, and storage of scrap metal materials are the primary activities with processing limited to baling and torch-cutting of ferrous materials. Ferrous materials at the facility include cast iron, white goods, unprepared ferrous, and busheling which arrive from peddlers, industrial accounts, and a municipal collection account. Cast iron is transported directly to mills while white goods, unprepared ferrous and nonferrous materials are transported as bales or loose material to other MMMI processing facilities via truck or barge.

The subject property is comprised of approximately four acres of land within an urban setting containing a mixture of residential, commercial and industrial properties that are supplied with municipal water and sanitary sewer. The subject property is situated on the south side of West Cortland Street and bordered on the west by a restaurant, residential dwellings, a plumber's shop, a gravel parking lot and North Elston Avenue; east by the North Branch of the Chicago River; and south a railroad easement and by a gas cylinder manufacturing company.

Six buildings are present on the subject property: the Office Building, Maintenance and Paint Shop, Welding Shop, Maintenance Office, Warehouse and Baler Control Building. The Office Building is a two-story brick building, which houses the scale office, manager's offices, restrooms, and conference rooms. The Maintenance and Paint Shop is a one-story brick and

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concrete block structure with a concrete floor. A locker room exists in the west end of this building and contains a basement that spans the length of the Office Building. Other features present include a maintenance area, paint area where lugger boxes are repainted, used oil storage, and new oil storage. A sealed oil-water separator/triple basin is located in the central portion of the Maintenance and Paint Shop. Two floor drains present in the building are believed to

discharge into the triple basin.

The Welding Shop, which is connected to the Maintenance and Paint Shop building through an open wall between the two structures, is a one-story brick and concrete block building with no basement. The shop is used to repair lugger boxes. A floor drain inlet is located in this building and is believed to discharge or have previously discharged into the stormwater drainage system

onsitc.

The Maintenance Office building is a one-story brick structure with a half-basement accessible through a crawl space opening along the south side of the building. The building currently is used as office space and for file storage.

The Metals Warehouse, located along the western property boundary adjacent to North Elston Avenue, is virtually empty with the exception of a few wood pallets that contain spent lead-acid batteries. Previous use of the building was for the storage of nonferrous peddler scrap. The building is primarily one-story and constructed of brick with a concrete floor. A second story of office-like rooms exists along the south end of the building.

The Baler Control Building is a one-story concrete block building with a concrete floor. The building houses the electrical components, a 3,000-gallon hydraulic oil reservoir, and a 500-gallon hydraulic oil reserve tank for baler operations.

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In addition to the buildings, other significant features include a truck scale, two inactive rail spurs (one that runs adjacent to the southern boundary that is elevated approximately ten feet above existing ground surface and one that trends in a north-south direction bisecting the subject property), chain-linked fencing along the northern and western boundaries, a barge-loading dock along the eastern side, and a stormwater collection pond on the southeast portion of the subject property. Subject property features are illustrated on Figure 2.

2.2 Subject Property History

As part of the Phase I ESA performed for the subject property, Sanborn Fire Insurance maps and historical aerial photographs were reviewed to determine historical usage of the subject property. From pre-1914 to pre-1950, Eureka Coal and Dock Company, including a blacksmith operation, occupied the premises. From pre-1950 to post-1975, Roth Adams Fuel Company stored coal at the property and an auto repair shop occupied the Welding Shop building. Between 1975 and 1988, the subject property was utilized as a scrap metal processing facility. Details of this review are presented in the Phase I ESA included in Appendix C.

2.3 Summary of Investigations and Sources Consulted

CPI consulted the following sources during site investigation activities at the subject property:

- Letter Report for Cometco Oil Facility, Ecology & Environment, Inc. (January 20, 1999)
- UST Site Classification Report, Andrews Environmental Engineering, Inc. (January 2000)
- Phase I Environmental Site Assessment, CPI Environmental Services, Inc. (April 28, 2000)

Data generated during these investigations have been included in the comprehensive evaluation presented in this report. To follow are summaries of documents consulted during site investigation activities at the subject property. Copies of these documents are included in Appendix C.

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2.3.1 Letter Report for Cometco Oil Facility (January 20, 1999)

Ecology & Environment, Inc., Superfund Technical Assessment and Response Team (START) conducted a site assessment in November 1998 under contract with the Emergency Response Branch of the U. S. EPA. START was tasked to compile background information; document site conditions; perform soil, sediment and surface water sampling; evaluate threats to human health and the environment; and make recommendations to U. S. EPA as to the potential need for removal action and further investigations. The site assessment was conducted in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan, following 40 CFR Section 300.415, paragraph (b)(2) and included the collection of five surface (0 to 1-foot depth) soil samples from areas adjacent to the stormwater pond and eastern property boundary (Sample S1-S5), one sediment sample from the pond (Sample S5), and two surface water samples (one from the pond, W2, and one from embankment runoff leading into the river, W1). The samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total metals, and polychlorinated biphenyls (PCBs). Three of the five soil samples also were analyzed for metals using the Toxicity Characteristic Leaching Procedure (TCLP).

Analytical results indicated that the only VOCs present in the soil, sediment and water samples were acctone and methylene chloride, which are common laboratory contaminants. Several SVOCs were detected at low concentrations in all samples. The detected compounds in soil/sediment and water samples were compared to the U.S. EPA Risk-Based Screening Concentrations (RBCs) for industrial soil and the Maximum Contaminant Levels (MCLs) for drinking water, respectively. None of the SVOCs compounds exceeded the RBCs, and no MCLs exist for those compounds detected in water samples. PCBs were not detected in excess of laboratory method detection limits in soil/sediment and water samples. Analysis of total metals revealed arsenic concentrations in five soil samples exceeded the RBCs and the TCLP analysis indicated leachable cadmium was present in four samples but at concentrations less than regulatory standards. The report stated that the metal concentrations observed are consistent with

the current use of the property. No recommendations for removal action or further investigation were made.

2.3.2 UST Site Classification and Completion Report (March 2000)

In September 1998, two underground storage tanks (USTs) that contained diesel fuel were removed from the eastern portion of the Welding Shop. A release was subsequently reported to the Illinois Emergency Management Agency and an incident number (982317) was assigned to the subject property. Andrews Environmental Engineering Inc. (Andrews) was retained by Cometco to provide consulting services relating to the UST release. Andrews completed a Site Classification in March 2000, which included the installation of five groundwater monitoring wells. Soil samples (B1-B6) from the monitoring well installation were obtained and analyzed for the appropriate IEPA indicator parameters (i.e., benzene, ethyl benzene, toluene, xylenes and polynuclear aromatics) for diesel fuel. Results of the soil analysis did not reveal presence of indicator parameters in exceedence of Tier 1 SROs for residential properties, as outlined in Title 35 IAC Part 742, Appendix B, Table A. Groundwater samples collected and analyzed from five monitoring wells contained no concentrations of indicator parameters greater than laboratory method detection limits. Based on these results, a "No Further Remediation" letter from the IEPA dated February 20, 2001 was granted.

2.3.3 Phase I Environmental Site Assessment (April 28, 2000)

CPI conducted a Phase I Environmental Site Assessment of the subject property in April 2000. The assessment was performed in general accordance with the American Society of Testing and Materials (ASTM), Standard Practice for Environmental Site Assessments, E 1527-97 and included a visual inspection of the subject property; interviews with people knowledgeable of the property; review of pertinent historical records; contact with the appropriate regulatory agencies; review of chemical and waste handling, storage, and disposal practices; review of surrounding land uses; review of an Environmental Data Resources (EDR) regulatory database report; review

of historical Sanborn maps and aerial photographs; and photographic documentation of the subject property and adjacent properties.

Results of the assessment identified the following potential recognized environmental conditions:

- Darkened, oily soil was observed underneath and around a 3,000-gallon hydraulic oil collection tank and north of the Baler Building. Additional soil staining, sheens on pooled stormwater, and milky appearance of pooled stormwater were observed near the rail spur, crane operating areas, and under scrap metal piles.
- Two floor drains and an oil water separator/triple basin were observed to exist in the Maintenance Building. This system is not associated with current occupants of the building.
- Phased and emulsified oils were observed in a stormwater retention pond located on the southeast portion of the property.
- A former transformer house, which was present along the northwestern fence line, was identified on Sanborn Fire Insurance maps.
- An adjoining property to the west, which formerly was a metal plating facility, was identified as a CORRACTS site.

In addition to these potential recognized environmental conditions, the assessment also identified previous land use of the subject property as a coal storage yard, fuel company yard and an automobile repair operation.

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3.0 SITE-SPECIFIC SAMPLING PLAN

The following subsections summarize site-specific procedures and sampling plan utilized during investigations conducted March 2000 and in August through October 2000.

3.1 Sample Location Selection

Test pit and boring locations were selected to evaluate potential recognized environmental conditions identified in the Phase I assessment and to characterize overall subject property soil quality. Subsurface conditions and samples were collected at the following specific areas to address potential areas of concern identified in the Phase I:

- Borings were advanced in the vicinity of floor drains and the triple basin system in the Maintenance Shop and Paint to assess potential impacts to subsurface soil from system leaks.
- Borings were advanced near a catch basin system within the Weld Shop to assess
 potential impacts to subsurface soil from system leaks.
- A boring was advanced at the location of an unidentifiable feature shown on historical Sanborn Map at the southwest corner of the Maintenance and Paint Shop.
- A boring was advanced near the location of a former transformer house immediately north of the present scale.
- Three borings were advanced at the far southwest, central, and northeast portion of the property to obtain Shelby[™] tube samples of native silty clay for purposes of obtaining site-specific physical characteristics of the material.
- Test pits and borings were excavated throughout operational portions of the property at areas displaying greatest surficial impact to assess overall soil quality at the subject property.
- Borings were advanced south of the Maintenance Office to delineate extent of potential gasoline and diesel impact from the former UST area.

- Hand augers were advanced at four locations surrounding the stormwater pond to assess potential impact from stormwater accumulations in this area.
- Sediment samples were collected from the stormwater pond to assess overall quality of accumulated sediments.
- Surface water samples were collected from the stormwater pond to assess overall water quality.
- Perched fill water encountered in test pits that displayed greatest sensory impact was sampled to assess overall water quality.

Sampling locations are identified on Figure 3.

3.2 Sample Collection Methodology

Test pits were excavated and soil borings were advanced to depths ranging from 1.5 to 12 feet below ground surface. Test pits were excavated using a track-mounted CAT 215B operated by B-Hough Construction Corporation of Griffith, Indiana, under the supervision of CPI personnel or a Bobcat 320 excavator equipped with a 20-inch toothed bucket operated by CPI personnel. A Geoprobe Advanced 66T operated by Rock & Soil Drilling under CPI personnel supervision was used to collect soil samples at five-foot intervals using dedicated acetate sleeves to variable depths based on observed soil conditions in the area. Soil borings were advanced with a Diedrich D-120 truck-mounted rotary drill rig advancing 4.25-inch inner diameter hollow stem augers (HSAs). Where possible, soil borings were continuously sampled to the depth of each boring terminus, using two-inch split-spoon samplers.

Shallower soil samples near the storm water pond were obtained using a Little Beaver gasoline-powered hydraulic auger to remove soil to a depth of two feet. A 3.25-inch diameter hand-held steel bucket auger was used to collect soil from the bottom of the hydraulically augured hole.

During test pit excavations and boring advancement, CPI personnel prepared logs describing the materials encountered. Test pit logs are included in Appendix A. Log preparation included the following elements:

- A description of soil types using the Unified Soil Classification System,
- Color of soil types,
- Percentage and size of gravel, sand and other fine-grained particles,
- Amount of moisture present,
- Qualitative description and strength of any unusual odors,
- Visual indication of the presence of any non-aqueous phase liquids,
- Date and time of activities,
- Dimensions of the excavation or depth of boring terminus, and
- Soil samples collected.

Upon noting soil conditions on boring logs, samples for chemical analysis were collected, where possible, from the greatest impacted zone as determined through visual and olfactory observations. A new pair of latex disposable gloves was donned prior to collecting each soil and water sample. Soil samples were collected by hand directly from excavation walls, split spoon samplers, or Geoprobe sleeves, placing a representative portion of soil into appropriate laboratory approved jars. VOC soil samples were collected using dedicated soil plungers; five-grams of soil were collected from *in-situ* soil areas, acetate sleeves, the bucket auger, or sediment dredger and transferred directly to three laboratory-provided pre-weighted vials: two containing sodium bisulfate preservative and one containing methanol. An additional aliquot of soil was placed into four-ounce laboratory glass jars for percent-solid determination.

Sediment was dredged from the bottom of the pond using an underwater sediment-dredging device attached to an extendible handle. Care was taken not to disturb the pond lining. Equal

volumes of dredged sediment were collected from each of the three locations, water was decanted off the sample, and PID readings were recorded directly from the dredger. Collected sediment was composited into a stainless steel bowl and thoroughly homogenated. An additional aliquot of sediment was dredged from the location displaying the highest relative PID readings for collection of a grab sample for VOC analysis.

Water samples were obtained by directly filling the appropriate laboratory supplied sample jars with water that had accumulated in excavations. Water samples collected from the stormwater pond were obtained by utilizing the backhoe bucket and subsequently filling laboratory jars with water from the bucket. Subsequent compositing of discrete water and soil samples, where required, was performed at the laboratory. Samples were maintained within iced coolers and were submitted daily following standard chain-of-custody procedures.

Trace gases were monitored using an HNu Model PI-101 Photoionization Detector (PID) equipped with a 10.2 eV lamp. A two-point calibration was conducted prior to sampling using a 100 parts per million (ppm) span gas composed of ISO-C₄H₈ and air solution. Span setting recorded at a 1.5-liters-per-minute flow rate was 5.40.

Shelby tubes collected for permeability and other physical property testing of the clayey/silty soil were advanced using the Diedrich D-120. Rock & Soil sealed the ends of the tubes with wax and plastic caps held in place by duct tape. Rock & Soil drillers transported the samples to the geotechnical laboratory.

3.3 Analysis Selection Procedures

Based on historical usage of the subject property, potential contaminants of concern identified included VOCs, SVOCs, PCBs, and metals. To follow is a summary of analysis selection procedures utilized during the investigations:

- Overall soil quality samples collected from throughout the facility, including fill material and native soil, were submitted for analysis of identified chemical parameters of concern.
- Samples collected to further assess gasoline and diesel impact south of the Maintenance Office were submitted for VOC analysis.
- Samples collected in the area of the former transformer house were submitted for PCB analysis.
- Soil and sediment samples from the stormwater pond area were submitted for VOC,
 SVOC, and total metal analyses.
- Samples collected from the unidentifiable historical feature in the Maintenance Shop and from near the triple basin and drainage system in the Maintenance and Weld Shop were submitted for identified parameters of concern.
- Additional samples collected to assess extent of preliminary identified areas of concern delineated during sampling event #1 (refer to Section 4.1) were submitted for only those parameters identified in excess of Tier 1 soil remediation objectives.
- A composite sample of fill material determined to be impacted by contaminants of concern was submitted for analysis to determine presence of potential hazardous characteristics and waste profiling parameters.
- Discrete samples displaying elevated total metals were submitted for TCLP metal analysis to assess potential worst-case toxicity characteristics of fill material onsite.
- Water samples collected from fill material and the stormwater pond were submitted for water quality and waste profiling parameters.

3.4 Laboratory Analytical Analysis

3.4.1 Chemical Parameters

Samples collected and selected for laboratory chemical analysis were delivered to First Environmental Laboratories, Inc, of Naperville, Illinois and analyzed in accordance with U.S. EPA methodologies as outlined in <u>Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods; SW-846</u>. Soil samples were analyzed for VOCs, SVOCs, PCBs, total metals, TCLP metals, and/or pH. Select samples were submitted for hexavalent and trivalent chromium designation. The composite soil fill sample and water samples from test pits and the pond were analyzed for various organic/inorganic compounds and physical properties. Specific methods are presented on laboratory reports included in Appendix B.

3.4.2 Physical Parameters

Samples collected for geotechnical analyses were delivered to Tri-Tech Engineering (Batavia, Illinois) and analyzed using U.S. EPA and ASTM standards. Selected analyses and corresponding methodology included particle size analysis (ASTM D422-63, Standard Test Method for Particle-Size Analysis), hydraulic conductivity (ASTM D5084-90, Standard Test Method for Measurement of Hydraulic Conductivity Using a Flexible Wall Permeameter), and organic carbon (ASTM D2974-87, Standard Test Methods for Moisture, Ash and Organic Matter of Peat and Other Organic Soils).

4.0 DOCUMENTATION OF FIELD ACTIVITIES

The following subsections include a narrative description of field activities conducted in March through October 2000. Documentation of previous field activities is presented in applicable reports included in Appendix C.

4.1 Field Activities

Soil and sediment samples were collected near the stormwater pond area on March 17, 2000 (Stormwater Pond Sampling Event). Initial property-wide preliminary investigation activities (Sampling Event #1) performed on August 31 and September 1, 2000 were conducted to define overall areas and contaminants of concern and to note general subsurface conditions. Based on results of preliminary investigations, additional investigations (Sampling Event #2) were conducted in October 2000 to further define extent of contaminants of concern identified during Sampling Event #1, to assess areas initially inaccessible during the preliminary investigation activities, and to define site-specific soil conditions.

4.1.1 Stormwater Pond Sampling Event

The following sampling locations were selected based on field conditions and to supplement data collected by E & E: east of the pond on the berm between the pond and the river (Soil-1), south of the pond on the slope between the pond and the tracks (Soil-2), west of the pond in an area of visual surface staining (Soil-3), and north of the pond between the pond and the busheling storage pile (Soil-4). Soil samples were collected from the surface and at approximately two feet below ground surface at each of the designated areas. Surface vegetation and/or scrap metal were scraped off the surface prior to collecting surface samples. Sediment samples from the bottom of the pond were collected from three locations: equal aliquots of sediments were composited from the three locations prior to analysis, with the exception of sediments for VOC analysis.

4.1.2 Sampling Event #1

Sampling Event #1 consisted of excavating 35 test pits (TP-101 through TP-135) to identify fill material, to evaluate impacted media associated with potential recognized environmental conditions, to identify potential sources of contamination, and to estimate the horizontal and vertical extent of contaminants of concern. In general, two soil samples were collected from each test pit. One sample was obtained from fill material and a second sample was obtained from native soil at depth to characterize the vertical extent of contamination. Where encountered and at selected locations, water samples were collected from test pits. In addition, a water sample collected from the stormwater pond was collected to evaluate potential hazardous characteristics of the water within the pond. Test pit excavation, sample collection, field documentation, and chain-of-custody procedures were performed as outlined in the site-specific sampling plan presented in Section 3.0.

4.1.3 Sampling Event #2

Sampling Event #2 consisted of excavating an additional thirteen test pits and advancing 43 borings. Environmental soil samples were collected using a Geoprobe® at borehole locations B-201 through B-211 on October 11, 2000 and at borehole locations B-314 through B-340 on October 24 to October 25, 2000. A Deidrich D-120 drilling rig was used to collect environmental and geotechnical samples from borings B-212 through B-216 on October 12, 2000. Additional test pit excavations to observe subsurface soil conditions and/or to collect soil samples from fill material were performed at locations TP-301 through TP-313 on October 16 and 17, 2000. Test pit excavation, sample collection, field documentation, and chain-of-custody procedures were performed as outlined in the site-specific sampling plan presented in Section 3.0.

4.2 Quality Assurance Project Plan

Environmental and geotechnical samples were collected in accordance with methods found in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA SW-846, 3rd Edition, December 1996. Sampling areas were protected with plastic sheets changed between borcholes and dedicated and decontaminated sampling tools were used for each sampling interval. Dedicated latex gloves, sampling spoons, soil plungers, and sampling sleeves were utilized at each sampling location.

Decontamination procedures were followed during sampling activities to reduce the potential for cross contamination between boreholes and samples. Drilling equipment (i.e., augers, rods, split-spoon samplers, hand tools) was decontaminated by steam cleaning prior to initial drilling and between soil boring locations. Sampling equipment and split-spoon samplers were decontaminated with a tap water and non-phosphate detergent solution, scrubbed with a hand brush, and double rinsed between soil samples.

Collected soil and water samples were immediately transferred into the appropriate laboratory-provided, clean glassware containing appropriate preservative, if required. Retained samples were immediately placed on ice within an insulated cooler prior to transport to analytical laboratory in accordance with standard chain-of-custody procedures. Where VOC analysis was conducted, trip blanks provided by the analytical laboratory were submitted for analysis. Cooler temperature and sample integrity were noted at the time of delivery to analytical laboratory. Analyses were performed within established holding times, and quality control criteria as outlined in the methods have been met.

5.0 INVESTIGATION RESULTS

The following subsections summarize findings of comprehensive investigations and laboratory analytical results.

5.1 Observed Conditions

A bituminous pavement with crushed stone base coarse covers the western two-thirds portion of the subject property. Intrusive surveys encountered suspected former concrete building foundations in various locations throughout the property including northwest of the stormwater pond, east of the south end of the warehouse, and west of the baler. The overa'l integrity of these concrete structures was unobserved, but suspected to be deteriorated.

Underlying pavement and base coarse is fill material, which overlies native silty clay. Fill material with variable constituents ranged in thickness from one foot to 13 feet. Typically, the fill material, consistent with fill material found throughout the city of Chicago, is characterized as black and/or brown sand and gravel with variable amounts of debris consisting of pieces of wood, glass, brick, cinders and concrete. Decayed wooden planks below scrap yard soil and coal-rich soil were encountered at two feet to five feet below ground surface in discrete areas in the central portion of the property.

Localized metal and coal fragments are found throughout the fill material. In general, metal fragments are abundant in the upper fill layers whereas coal fragments are abundant in lower fill layers. A high concentration of metal turnings is present in surface fill in the southeast portion of the property. Variable amounts of coal are present in the areas of test pits TP-107, TP-112, TP-113, TP-114, TP-305. The most significant amount (greater than two feet) of coal was encountered in test pit TP-112.

Free-product identified as hydraulic oil and cooling oil mixed with water was noted east and north of the baler in the area of the former hydraulic oil collection tank and near the stormwater pond, respectively, during test pit excavations and geoprobe advancements. The suspected free-product was identified primarily in a layer of three-inch crushed stone in these areas.

Slight to strong petroleum-like odors were identified within the fill materials. Petroleum-like odors ranged from cooling oil, hydraulic oil, diesel, and gasoline. In particular, a strong gasoline-like odor was prevalent in the area of test pit TP-116, and a strong diesel-like odor was noted in the area of B-206.

Underlying fill material is brown to gray silty clay. Uniform discoloration and darkening appearing to be a former topsoil layer was noted on the top one-half-foot to one-foot of the silty clay surface at some of the sampling locations. Minor impact to the silty clay from overlying fill material was noted only at select locations; typically visual staining of native soil was confined to the top one to two inches of the silty clay, with the exception of B-328, where oily water was observed within discrete vertical fissures in the top two feet of silty clay.

Perched water was encountered in various intervals throughout the fill material at confined areas throughout the property. The water was identified above silty clay and trapped in pockets around concrete foundations. An oily sheen was evident on the water surface at test pits TP-118, TP-128 TP-135, TP-128, and B-328. In TP-135, a clay tile drainpipe was encountered at a depth of approximately 3.5 feet below ground surface. The origin and purpose of the pipe is unknown, but suspected to be remnant sewer line from former operations. When encountered, water from the pipe filled the excavation. The water contained an oily sheen and emitted a strong petroleum-like odor.

Surface water within the stormwater retention pond appeared discolored and of poor quality. A black plastic sheeting, assumed to be the lining, was noted emerging from soil along the east sloped bank of the pond. Pond sediments in sampling locations consisted of organic debris and other sediment coated with black oil.

Detailed descriptions of subsurface observations are noted on test pit and boring logs included in Appendix A or in the applicable previous investigation report included in Appendix C.

5.2 Laboratory Analytical Results

A summary of laboratory analytical results is presented in Tables 1 through 6. The summary tables include comprehensive results obtained from current and previous investigations, as discussed in Section 2.3. Laboratory Analytical Reports are included in Appendix B or in the appropriate appended report.

5.2.1 Chemical Results

Analytical data are tabulated as follows:

- VOC analytical results of soil samples are presented in Table 1.
- SVOC analytical results of soil samples are presented in Table 2.
- PCB analytical results of soil samples are presented in Table 3.
- Total metal and pH results of soil samples are presented in Table 4.
- Analytical results for surface water samples are presented in Table 5.
- Analytical results for sediment samples are presented in Table 6.

Sample B-337, which showed a total chromium concentration of 13,600 mg/kg, was subsequently reanalyzed to determine the form of chromium present. Analysis by Method 7196A did not indicate that hexavalent chromium was present, and therefore, chromium is presumed present in the trivalent form, which is consistent with historical usage of the subject property.

Tables present compounds detected in excess of detection limits or with detection limits exceeding applicable SROs. A comprehensive table legend is included as an insert preceding the tables.

Four samples collected from B-212, B-213, B-214, and B-216 were submitted for analysis of organic carbon content. Values ranged from 1.63 percent at B-214 to 2.35 percent at B-212 with a geometric mean of 1.94 percent.

5.2.2 Physical Results

CPI submitted three samples of silty clay collected from B-212, B-213, and B-214 for particle size analysis and hydraulic conductivity testing. Particle-size analysis shows native silty clay contains 0.7 percent to 3.7 percent gravel, 14 percent to 21.2 percent sand, and 75.1 to 85.3 percent fines. Hydraulic conductivity ranged from 7.38 x 10⁻⁸ cm/sec at B-213 to 1.61 x 10⁻⁷ cm/sec at B-212 with geometric mean of 1.23 x 10⁻⁷ cm/sec.

6.0 ENDANGERMENT ASSESSMENT

An endangerment assessment presented in this section as required by 35 IAC Part 740.425 has been prepared using a Tier 1 TACO analysis prepared in accordance with current requirements pursuant to 35 IAC Part 742. Only limited site-specific information in the form of concentration of contaminants at the property, land use classification, and groundwater classification has been used in the analysis.

6.1 Potential Receptor Populations

The subject property currently is classified as industrial-commercial as defined in 35 IAC Part 742, and this designation is presumed to not change upon divestiture based on its location in an industrial corridor and its zoning. The potential exposed receptor populations at the subject property are based on present and anticipated future land use of the subject property and adjacent properties; therefore, residential receptors have been eliminated from consideration. Industrial-commercial users and construction workers remain as potentially exposed populations and are, therefore, solely used in the Tier 1 evaluation presented herein.

6.2 Exposure Route Evaluation

In accordance with 35 IAC Part 742.300, Subpart C, an evaluation of potential exposure routes for receptor populations and determination of pathway exclusion is made in the following subsections. The evaluation of each exposure route includes consideration for excluding that exposure route if it can be demonstrated that a receptor or potential receptor will not be impacted by a contaminant of concern. An evaluation of the following exposure routes are made:

- Soil Inhalation
- Soil Ingestion
- Groundwater Ingestion

6.2.1 Pathway Exclusion Determination Criteria Evaluation

To exclude exposure routes from further consideration, conditions outlined in 35 IAC Part 742.305 regarding contaminant sources and free product determination need to be considered. Specifically, the attenuation capacity of the soil and the soil saturation limit cannot be exceeded and soil cannot display hazardous characteristics if exposure routes are to be excluded. The following subsections present a discussion of these conditions as they apply to the subject property.

6.2.1.1 Soil Attenuation Capacity

Based on a comparison between the maximum displayed sum of organic contaminant residual concentrations calculated to be 2,126.8 mg/kg at a discrete sampling point B-201 with an average site-specific natural organic carbon fraction determined to be 19,550 mg/kg (or default value of 6,000 mg/kg for soils within the top meter), soil attenuation capacity is shown not to be exceeded since organic carbon fraction is greater than total organic contaminant concentrations at each discrete sampling point.

Although free product has not been detected in groundwater monitoring wells and concentrations of contaminants of concern in the soil, as identified in Section 3.0, do not indicate saturated conditions that would suggest the presence of free phased product and exceedence of soil attenuation capacity, sampling locations near the baler and stormwater pond, specifically test pits TP-118, TP-120, TP-135, B-326, and B-328, exhibited visual indications of oil-coated fill and sheen on perched water surfaces within the fill material. Based on these observations, it is believed that the total petroleum hydrocarbon concentration likely exceeds that natural organic carbon fraction of the soil in these areas, thereby disallowing exposure route exclusion unless these source areas are removed through remedial action.

6.2.1.2 Soil Saturation Limits

A comparison of maximum detected concentrations of organic contaminants displaying a melting point below 30 degrees Celsius at discrete sampling points with predetermined values listed in Part 742, Appendix A, Table A has shown soil saturation limits are not exceeded.

6.2.1.3 Hazardous Characteristics Determination

Based on pH, TCLP results, and other chemical and physical analyses conducted on discrete and composite samples of fill material, soil has not been shown to display hazardous characteristics as listed in Section 742.305(c) through (e).

6.2.2 Soil Inhalation Exposure Route

The inhalation exposure route can be excluded if the following conditions are met:

- The site has been adequately characterized, and
- No free product or potential free product exists, and
- The concentration of each contaminant of concern is below the Tier 1 soil remediation objectives for the inhalation exposure route, or
- An engineered barrier is in place and safety precautions for the construction worker are taken if the Tier 1 construction worker remediation objectives are exceeded.

Unless engineered barriers and institutional controls are implemented and maintained during future development of the property, the inhalation exposure route cannot be excluded from consideration due to the presence of contaminants detected in excess of the Tier 1 soil remediation objectives, as discussed in Section 6.3, for the inhalation exposure route.

6.2.3 Soil Ingestion Exposure Route

The ingestion exposure route can be excluded if the following conditions are met:

- The site has been adequately characterized, and
- No free product or potential free product exist, and
- The concentration of each contaminant of concern is below the Tier 1 soil remediation objectives for the inhalation exposure route, or
- An engineered barrier is in place and safety precautions for the construction worker are taken if the Tier 1 construction work remediation objectives are exceeded.

Unless engineered barriers and institutional controls are implemented and maintained during future development of the property, the ingestion exposure route cannot be excluded from consideration at the subject property due to the presence of contaminants detected in excess of Tier 1 objectives, as discussed in Section 6.3, for the ingestion exposure route.

6.2.4 Groundwater Ingestion Exposure Route

The groundwater ingestion exposure route may be excluded from consideration when conditions outlined in Section 742.320 (a) through (f) are met. The following table presents a discussion of conditions that are met to allow for the exclusion of the groundwater ingestion exposure route.

Condition of Exclusion	Discussion	Has condition been met?
Adequate characterization of the extent and concentrations of contaminants of concern must be performed.	Investigations conducted throughout the property have adequately defined the extent of contamination and concentrations present. Characterization has shown contaminants of concern to be confined to fill material with no significant impact to underlying native materials. Based on minimal to no detection of contaminants of concern in silty clay and documented physical properties of silty clay, migration of contaminants of concern from fill material to underlying native material (and subsequently groundwater) is unlikely. Only limited and confined perched water was observed in fill material; no groundwater was observed to interact directly with fill material in test pits and borings, thereby further minimizing migration of contaminants of concern to groundwater. No migration of contaminants of concern is further substantiated by lack of detection of BTEX and PNAs (which were detected in fill material in the area of monitoring well installation and throughout the property, respectively) in groundwater at the five monitoring wells located beneath or down gradient of areas displaying BTEX and/or PNAs in fill material.	YES
Contaminant source and free product determination must be performed in accordance with Section 742.305.	Section 6.2.1 of this report presents a full discuss of this exclusion determination. Upon removal of potential free product areas as presented in Figure 9, conditions outlined under Section 742.305 will have been met and the groundwater ingestion exposure route may be excluded.	NO

Condition of Exclusion	Discussion	Has condition been met?
The source of the release (i.e., impacted fill material) must not be located within the minimum setback zone or within a regulated recharge area of a potable water supply well.	The subject property is not within the set back zone of any identified potable water well or regulated recharge area based on review of available records. See further discussion below.	YES
An ordinance adopted by a unit of local government must be in place that effectively prohibits the installation of potable water supply wells.	No future potable water supply wells will be installed due to the City of Chicago ordinance that prohibits the installation of groundwater wells for potable use. See further discussion below.	YES
The concentration of contaminant of concerns in groundwater within the minimum or designated maximum setback zone of an existing potable water supply well must meet the applicable Tier 1 groundwater remediation objective.	This condition has been met since groundwater has not been impacted by contaminants of concern at the property (as discussed above) and no potable water supply wells are or will be located in the vicinity of the property due to the City of Chicago ordinance.	YES
The concentration of contaminant of concerns in groundwater discharging into surface water must meet applicable surface water quality standard under 35 IAC 302.	Since groundwater has not been impacted by contaminants of concern at the property (as discussed above), groundwater discharging into nearby surface water likely meets applicable water quality standards.	YES

Andrews Environmental, as part of LUST closure requirements, contacted ISGS, ISWS, and IEPA regarding the location of community and potable water supply wells. To supplement Andrew's review, CPI reviewed records obtained from ISGS, Illinois State Water Survey's PICS (Public-Commercial-Industrial) database, and EDR's Geocheck Report. Correspondence and records obtained from these sources are included in Attachment 4 and 5 of the *Site Classification and Completion Report* included in Appendix C and in Appendix D of this report, respectively. Results of the survey indicate that no potable water wells exist within 200 feet of the source area and that no community water supply wells exist within 2,500 feet of the source area.

In addition, Andrew's contacted Cook County and City of Chicago to determine if local ordinances and/or policies regulating that usage if potable water supply wells are in place. It was determined that Cook County and the City of Chicago have a groundwater ordinance that prohibits the use of potable water supply wells. The ordinance was completed May 14, 1997 and the memorandum of understanding was completed in July 3, 1997.

Based on the above discussion, upon completion of corrective measures to remove free product from areas delineated in Figure 9, the groundwater ingestion exposure route can be eliminated from further evaluation.

6.3 Tier 1 Soil Remediation Objectives and Contaminants of Concern

The Tier 1 analysis presented in the following subsections involves an evaluation of contaminant concentrations detected at the subject property in relation to baseline remediation objectives tabulated in Part 742, Appendix B tables. Consideration of exposure routes by inhalation and ingestion for both industrial/commercial and construction workers are presented since the groundwater pathway will be excluded, as discussed in Section 6.2.4.

TACO allows for an area background concentration to be used to support a request to exclude a chemical as a contaminant of concern from further consideration or as a remediation objective for a contaminant of concern in lieu of Tier 1 soil remediation objectives (SROs). CPI utilized predetermined arsenic background concentrations in lieu of industrial-commercial worker ingestion exposure route SRO of 3 mg/kg. Median background arsenic soil concentrations in metropolitan statistical areas in Illinois have been determined to be 7.2 mg/kg with a range of 1.1 mg/kg to 24 mg/kg, as published in *A Summary of Selected Background Conditions in Inorganics in Soil* (IEPA: August 1994).

Part 742, Appendix B tables refer to 40 CFR §761.120—*PCB Spill Cleanup Policy* as a reference for addressing PCBs under TACO. Since TACO was last revised in June 1998, 40 CFR §761 has been amended to include §761.61—*PCB Remediation Waste* to address existing spills specifically excluded from 40 CFR §761.120 by §761.120(a)(1). For purposes of establishing PCB cleanup objectives pursuant to 40 CFR §761.61, the subject property is presumed a high occupancy area since future individual occupancy likely will exceed 335 hours for a calendar year. The cleanup objective for bulk PCB remediation wastes in high occupancy areas is equal to or less than 1 part per million if no engineered barrier is present [§761.61(a)(4)(i)(A)]. Concentrations not exceeding 10 mg/kg are allowable in high occupancy areas covered with a cap meeting requirements defined by 40 CFR §761.61(a)(7) and (a)(8).

Three VOCs and eight SVOCs that have no established Tier 1 SROs were detected in fill material. The following SROs calculated using Tier 2 SSL Equations provided in Section 742, Appendix C, Table A are utilized to evaluate risk associated with the following contaminants of concern:

		SI	RO		
Contaminant of Concern	ı	strial- nercial	Constr Wor		Justification
	Ing.	lnh.	Ing.	Inh.	
2-Butanone	NL	NL	120,000	NL	Preliminary Tier 2 SSL Equation Calculations using default values
Chloromethane	440	NL	9,600	NL	Preliminary Tier 2 SSL Equation Calculations using default values
4-methyl-2-pentanone	160,000	NL	16,000	NL	Preliminary Tier 2 SSL Equation Calculations using default values
Acenaphthylene	41,000	NE	4,100	NE	Preliminary Tier 2 SSL Equation Calculations using default values
Benzo[g,h,i] perylene	61,000	NE	6,100	NE	Preliminary Tier 2 SSL Equation Calculations using default values
4-chloro-3- methylphenol	NE	NE	NE	NE	
4-chlorophenyl- phenylether	NE	NE	NE	NE	
Dibenzofuran	NE	NE	NE	NE	
2-Methylnaphthalene	61,000	NE	6,100	NE	Preliminary Tier 2 SSL Equation Calculations using default values
3,4-Methylphenol	NE	NE	NE	NE	
Phenanthrene	61,000	NE	6,100	NE	Preliminary Tier 2 SSL Equation Calculations using default values

NL = No Limit (calculated Tier 2 level in excess of 1,000,000)

NE = No toxicological-specific references available

Due to the assumption that industrial-commercial workers are exposed to overall soil conditions and not one specific area in contrast to construction workers who may be exposed to one specific area, averaging of soil data collected in contaminated areas was conducted in accordance with 35 IAC Part 742.225(d) and (e) to determine site-specific risk to industrial-commercial workers for certain contaminants of concern exceeding industrial-commercial Tier 1 SROs. In performing calculations, values exceeding construction worker SROs for a particular contaminant of concern were eliminated based on the presumption that remedial action will be required at these locations, thus eliminating the sampling point.

6.3.1 Native Soil

No VOCs, SVOCs, PCBs, or metals were detected in excess of Tier 1 objectives in 22 soil samples collected from the native silty clay soil, with the exception of arsenic. Of the 22 samples collected, seven were analyzed for total RCRA metals, 17 were analyzed for PCBs, 11 were analyzed for SVOCs, and 12 were analyzed for VOCs.

Concentrations of arsenic in silty clay soil ranged from 6.2 mg/kg at TP-120 to 10.8 mg/kg at TP-123 with an average site-wide concentration of 9.2 mg/kg (and geometric mean of 9.03 mg/kg), based on seven analyzed samples. Detected concentrations within native soil at the subject property are determined to be within background soil concentration ranges as established in metropolitan areas in Illinois, and therefore, arsenic is not considered a compound of concern in native soil.

6.3.2 Fill Material

6.3.2.1 VOCs

Samples collected from fill material throughout areas of concern at the subject property reveal low concentrations of various VOCs throughout fill material, as presented on Table 1. Only vinyl chloride and benzene were detected exceeding Tier 1 SROs.

Vinyl chloride was detected at 0.081 mg/kg, slightly exceeding construction (0.08 mg/kg) and industrial-commercial (0.06 mg/kg) inhalation exposure route values at TP-120. Ingestion exposure route values for industrial-commercial (3 mg/kg) and construction worker (65 mg/kg) were not exceeded. Based on analytical results of nearby samples and observed soil conditions, the presence of vinyl chloride in this area, as presented on Figure 4, is localized.

Benzene was detected exceeding construction worker (2.1 mg/kg) and industrial-commercial (1.5 mg/kg) inhalation exposure route values at concentrations ranging from 2.140 mg/kg to 14.8 mg/kg at B-206, B-333, B-334, and B-336, as presented in Figure 3, where gasoline and diesel odors were noted in fill material. Ingestion exposure route values for industrial-commercial (200 mg/kg) and construction workers (4,300 mg/kg) were not exceeded. Based on analytical results of nearby samples and observed soil conditions, presence of benzene in this area, as presented on Figure 4, is localized.

6.3.2.2 SVOCs

Samples collected from fill material throughout the subject property reveal the presence of SVOCs throughout fill material, as presented on Table 2. Only the following SVOC compounds were detected exceeding Tier 1 soil remediation objectives: benzo[a]anthracene, benzo[b]flouranthene, benzo[k]flouranthene, benzo[a]pyrene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene. Figure 5 and the following table summarize areas where concentrations of detected SVOCs exceed industrial-commercial and construction worker ingestion exposure route values:

Contaminant of Concern					
	Industrial/ Commercial (I/C) Ing. (mg/kg)	Construction Worker (CW) Ing. (mg/kg)	Locations exceeding I/C	Locations Exceeding CW	
benzo[a]anthracene	8	170	TP-120 B-201 B-205 B-208 B-332	B-201	
benzo[a]pyrene	0.8	17	TP-102 TP-106 TP-109 TP-120 B-201 B-205 B-207 B-208 B-209 B-211 B-214 B-216 B-323 B-332 SOIL-1 S-1 S-5 (TP-108) (TP-114) (TP-119) (TP-123) (TP-127) (TP-133)	B-210 B-205 B-208	
benzo[b]flouranthene	8	170	TP-120 B-210 B-205 B-208 B-332	NONE	
benzo[k]flouranthene	78	1,700	B-201	NONE	
dibenzo[a,h]anthracene	0.8	17	TP-114 TP-120 B-203 B-205 B-207 B-208 B-209 B-332 (TP-108) (TP-119) (TP-123) (TP-127) (TP-129) (TP-133)	NONE	
indeno[1,2,3-cd]pyrene	8	170	TP-114 TP-120 B-201 B-208	NONE	

NOTES: () = Location where detection limit for contaminant of concern exceeded SRO

The occurrence of SVOCs throughout fill material in non-operational and protected areas suggests polynuclear aromatic (PNA) compounds are inherent to fill material at the property and are likely not a result of scrap metal operations performed onsite. In addition, fill material on the subject property is consistent with fill material found throughout the city of Chicago.

6.3.2.3 PCBs

Samples collected from fill material throughout the subject property reveal concentrations of PCBs exceeding method detection limits ranging from 0.318 mg/kg to 214.8 mg/kg, as presented on Table 3 and Figure 6. Three impacted areas are defined that contain PCBs in excess of the high-occupancy remediation criteria of 1 mg/kg: fill material in the southwest corner scrap storage area, fill material in the central scrap storage area and baler feed area, and north and south of the baler.

6.3.2.4 Metals

Samples analyzed for RCRA total metals indicate that arsenic and lead are present in fill material in excess of Tier 1 SROs. A summary of detected concentrations is presented in Table 4.

Arsenic is present at concentrations ranging from 0.30 mg/kg to 120 mg/kg as depicted in Figure 7. Arsenic is present at concentrations exceeding the construction worker ingestion exposure route value of 61 mg/kg at TP-134 (97.80 mg/kg), TP-108 (120.0 mg/kg), and B-316 (72.50 mg/kg); no concentrations were detected exceeding inhalation exposure route values of 1,200 mg/kg for industrial-commercial workers and 25,000 mg/kg for construction workers. Average concentration of arsenic in fill material, excluding values exceeding commercial worker ingestion exposure route values, is 14.11 mg/kg, which is consistent with background arsenic soil concentrations in metropolitan statistical areas in Illinois.

Total lead is present at concentrations ranging from 18.60 mg/kg to 6,930.0 mg/kg. Industrial-commercial and construction worker ingestion exposure route values of 400 mg/kg are exceeded at TP-127, TP-129, TP-301, TP-303, TP-308, TP-309, B-319, B-321, B-322, B-323, B-325, B-328, B-337, B-338. B-339, Soil-1, S-1, and S-4, as depicted on Figure 8.

6.4 Surface Water

Surface water investigations included evaluation of surface run-off into the Chicago River and surface water accumulation in the storm water pond area. Analytical results obtained are presented on Table 5.

E & E collected one surface water sample from embankment run-off from the subject property to the Chicago River (See Section 2.3.1). E & E compared analytical results to U.S. EPA Maximum Contaminant Levels (MCL) for drinking water, and found MCLs were not exceeded in surface water run-off.

Surface run-off from operational storage areas east of the rail spur and south of the baler are directed and impounded into the stormwater retention pond. Phased and emulsified oil likely associated with stormwater contact with scrap material containing residual oil are apparent visually within the accumulated stormwater. Although engineering drawings of the stormwater pond show the pond to be lined, the integrity of the lining is unknown. The presence of oil within stormwater accumulation in this area may create "offensive conditions" under 35 IAC Part 302, Section 203, and since the integrity of the lining is unknown, may pose a potential source area that would prevent the exclusion of exposure pathways. Based on this, remediation of surface water accumulations in this area is recommended.

6.5 Groundwater

Five groundwater monitoring wells were installed by Andrews (See Section 2.3.2) at locations depicted on Figure 2. Wells were installed beneath and down gradient of fill material containing elevated concentrations of contaminants of concern, including PNAs and BTEX. Groundwater samples collected during LUST closure activities from the monitoring wells show no detection of BTEX or PNAs exceeding the most restrictive Tier 1 remediation objective. Information

pertaining to well construction and groundwater analysis are included in Andrews' report provided in Appendix C.

6.6 Sediments

E & E and CPI separately investigated sediment from the bottom of the stormwater pond in 1998 and 2000, respectively. Methodologies and full analytical reports are included within the respective reports included in Appendix C. A summary of analytical results is presented on Table 6.

Two sediment samples were submitted for VOC, SVOC, PCB, and metals analysis. Results were compared to Tier 1 SROs. Analysis showed arsenic to be present in excess of Tier 1 SROs in pond sediments. Arsenic is present at concentrations ranging from 7.5 mg/kg to 10.3 mg/kg, which is consistent with background arsenic soil concentrations in metropolitan statistical areas in Illinois.

Bottom sediments within the stormwater pond were observed to be coated with oil. Although engineering drawings of the stormwater pond show the pond to be lined, the integrity of the lining is unknown. The presence of visible oil on bottom sediments within the pond may create "offensive conditions" under 35 IAC Part 302, Section 203, and since the integrity of the lining is unknown, may pose a potential source area that would prevent the exclusion of exposure pathways. Based on this, remediation of sediment accumulations within the stormwater pond is recommended.

7.0 CONCLUSIONS

7.1 Investigative Findings

Past and present investigations focused on conditions of soil, sediments, groundwater, and surface water at the subject property have adequately defined the extent and severity of contamination present throughout the subject property. To follow is a summary of conclusions drawn based on evaluations of investigative findings.

7.1.1 Soil Conditions

historical industrial use of the subject property has resulted in impact to fill material in operational areas throughout the subject property. Contaminants of concern present in fill material include petroleum hydrocarbons, VOCs, SVOCs, metals, and PCBs. A Tier 1 evaluation pursuant to TACO indicates that polynuclear aromatic (PNA) hydrocarbons, polychlorinated biphenyls (PCBs), lead, arsenic, benzene, vinyl chloride, and petroleum hydrocarbons are present in fill material such that action will be needed to provide for adequate protection of potential receptor populations.

Characterization has shown contaminants of concern to be confined to fill material with no significant impact to underlying native silty clay material. Based on minimal to no detection of contaminants of concern in silty clay and documented physical properties of the silty clay, no significant migration of contaminants of concern from fill material to underlying native material has occurred.

Fill material throughout the property is highly variable and is consistent with fill material found throughout the City of Chicago. Historical and current operational influences are seen throughout fill material, such as the occurrence of metal-containing soil near the top of fill

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material and the occurrence of coal fragments throughout fill material with higher concentrations at a greater depth in the fill material. Also apparent are decayed wood planks, remnant of the

former coal yard, throughout the central portion of the property and overlying native material.

The occurrence of PNAs exceeding Tier 1 SROs in fill material also is consistent with fill material found throughout the City of Chicago and likely is inherent to material used to fill the property. This is substantiated by widespread occurrence of PNAs throughout the fill material, presence in fill material at non-operational portions of the property, and presence under building

foundations and other barriers.

The occurrence of elevated metals (i.e., lead and arsenic) and PCBs in fill material in excess of Tier 1 SROs is attributed to storing and processing of scrap metal at the subject property and appears confined to former and current storing and processing areas delineated on Figure 2. Elevated PCBs are shown to exist in three areas: at the scrap storage area in the southwest corner of the property, along the rail spur, and north of the baler. Arsenic is present at concentrations inconsistent with area background concentrations in two areas: northwest of the baler and under the steel plate pad in the southern portion of the property. Lead is present exceeding Tier 1

SROs in various areas throughout operational portions of the property.

VOCs detected at concentrations exceeding Tier 1 SROs include vinyl chloride and benzene. Slightly elevated vinyl chloride concentrations are present in fill material north of the stormwater pond. The source of vinyl chloride in this area is unknown, but appears associated with oily fill material. Benzene is present at elevated concentrations south of the Maintenance Office and likely is associated with former USTs in this area.

likely is associated with former US1s in this area.

Petroleum hydrocarbons, including hydraulic oil and cooling oil, are present in fill material near the baler and near the stormwater retention pond, respectively, as presented on Figure 9.

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Hydraulic oil present in fill material by the baler is attributed to spills and overfills associated with a hydraulic oil collection tank formerly located in the vicinity of boring B-328. Cooling oil present in fill material at the area north of the pond is attributed to the storage of scrap material containing residual oil in this area, which was designed to encourage direct drainage of run-off to the stormwater pond. Oily conditions present in these areas appear confined to a course gravel fill layer. Test pits and borings show the horizontal extent of oily conditions are confined to the areas depicted on Figure 9, and vertical extent is confined by native silty clay material underlying the fill material. Minor impact was observed in surficial vertical fissures in silty clay at only one location, B-328, directly underneath the former hydraulic oil location; impact to native material by oil was not observed at other locations in these areas. Removal of soil containing potential free product will be required in order to exclude exposure routes.

7.1.2 Groundwater Conditions

Investigations have revealed no evidence of adverse impact to groundwater present in native silty clay material as a result of the presence of contaminants of concern at the subject property. Characterization has demonstrated contaminants of concern to be confined to fill material with no significant impact to underlying native materials. Based on minimal to no detection of contaminants of concern in the silty clay and documented physical properties of the silty clay, migration of contaminants of concern from fill material to underlying native material (and subsequently groundwater) is unlikely.

Only limited and confined perched water was observed in fill material; no groundwater was observed to interact directly with fill material in test pits and borings, thereby further minimizing migration of contaminants of concern to groundwater. No significant migration of contaminants of concern is further substantiated by lack of detection of BTEX and PNAs (which were detected in fill material in the area of monitoring well installations and throughout the property,

respectively) in groundwater at the five monitoring wells located beneath or down gradient of areas displaying BTEX and/or PNAs in fill material.

7.1.3 Surface Water Conditions

No evidence of environmental concern is associated with direct surface water run-off from the subject property to the Chicago River. However, the presence of oil within surface water accumulations within the stormwater pond create "offensive conditions" pursuant to 35 IAC Part 302, Section 203, and since the integrity of the pond lining is unknown, may pose a potential source area that would prevent the exclusion of exposure pathways. Based on this, remediation of surface water accumulations in this area is recommended.

7.1.4 Sediment Conditions

Although no contaminants of concern were detected at concentrations that would pose risk to onsite workers, bottom sediments within the stormwater pond were observed to be coated with oil. The presence of visible oil on bottom sediments within the pond creates "offensive conditions" pursuant to 35 IAC Part 302, Section 203, and since the integrity of the lining is unknown, may pose a potential source area that would prevent the exclusion of exposure pathways. Based on this, remediation of sediment accumulations within the stormwater pond is recommended.

7.2 Endangerment Assessment

Evaluations have shown potentially exposed populations are limited to industrial/commercial and construction workers who may disturb site soil. The groundwater exposure route can be eliminated and no further evaluation of this exposure route is required. However, prior to pursuing elimination of exposure routes, corrective measures in the vicinity of the baler and stormwater pond are recommended to eliminate potential contaminant sources and potential free product observed in these areas. Unless future redevelopment activities include implementation

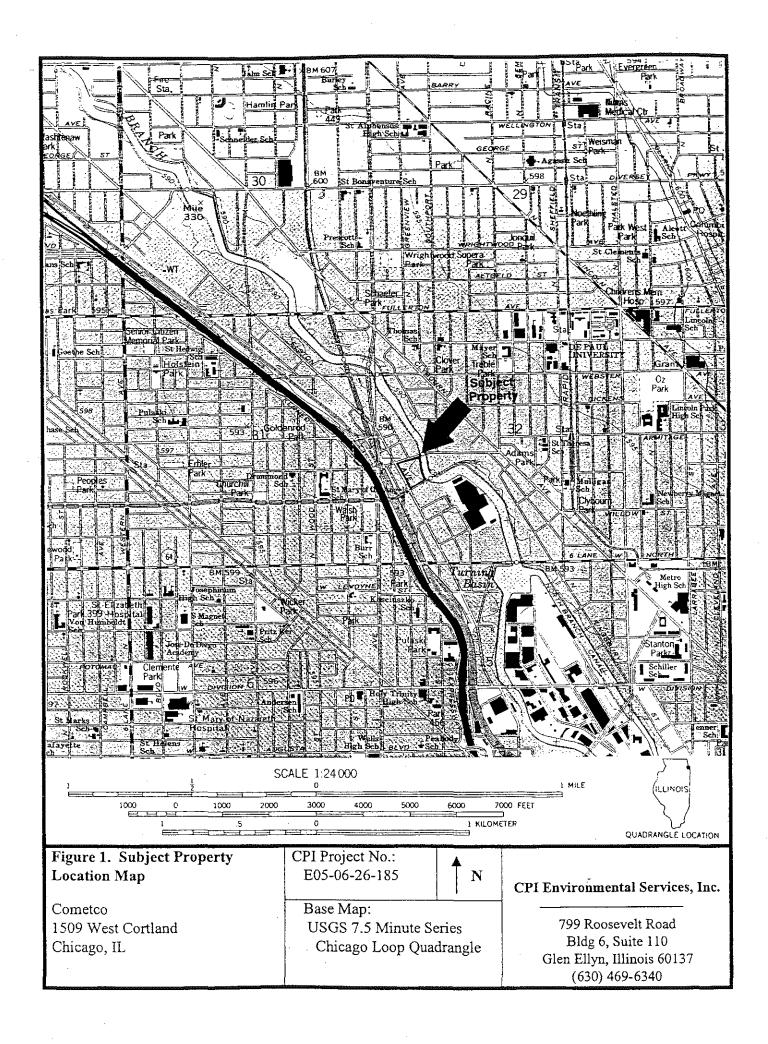
and maintenance of institutional controls and/or engineered barriers, the soil inhalation and ingestion exposure routes for industrial-commercial and construction workers cannot be excluded since contaminants of concern are present in excess of Tier 1 soil remediation objectives as presented in the following table:

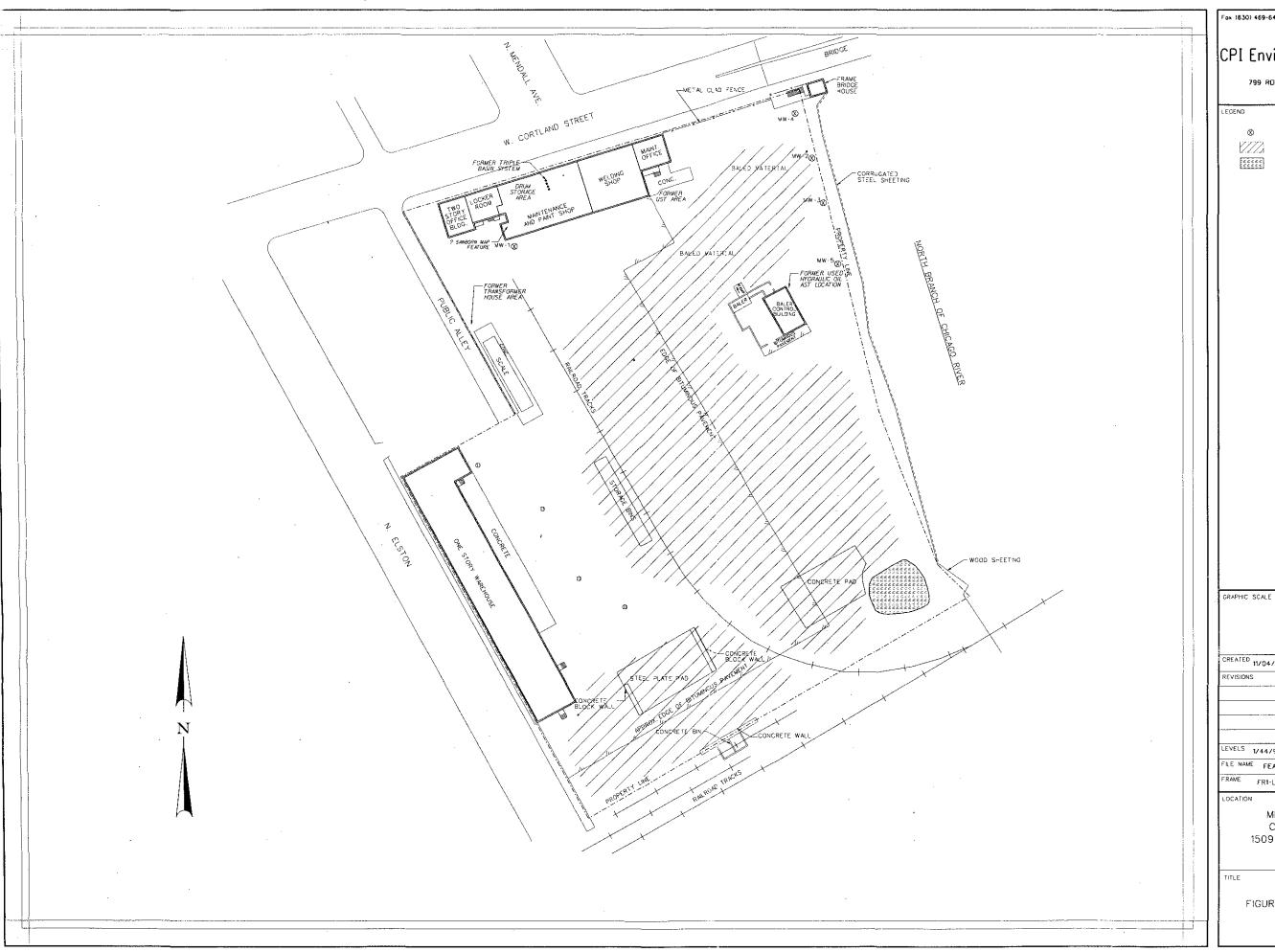
	Industrial-Com	mercial Worker	Construction Worker				
Contaminant of Concern	Ingestion	Inhalation	Ingestion	Inhalation			
Vinyl Chloride							
Benzene							
PCBs							
Benzo(a)anthracene							
Benzo(b)fluoranthene							
Benzo(b)pyrene							
Dibenzo(a,h)anthracene							
Indeno(1,2,3-cd)pyrene	and the state of t						
Arsenic							
Lead				<u></u>			

NOTES:

⁼ Contaminant of concern exceeds Tier 1 SRO established for exposure pathway

⁼ No Tier I Soil Remediation Objective Established for pathway





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MONITORING WELL (APPROXIMATE LOCATION)

SCRAP METAL STORAGE AREA

STORMWATER RETENTION POND

CREATED 11/04/2000 DRAWN HH/SAS APVD MBH REVISIONS

LEVELS 1/44/9

FILE NAME FEATURES-FIG.DON

FRAME FR1-LG.DGN

PROJ. NO. E-05-73-01-199

LOCATION

METAL MANAGEMENT, INC. COMETCO CORPORATION 1509 WEST CORTLAND STREET CHICAGO, ILLINOIS

FIGURE 2. SUBJECT PROPERTY FEATURES MAP



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799 RODSEVELT RDAD, BUILDING 6, SUITE 110 GLEN ELLYN, ILLINGIS 60137

- SEDIMENT SAMPLE LOCATION (3/17/2000)

- SURFACE SAMPLE LOCATION (3-17-2000)

. TEST PIT SAMPLE LOCATION (8-31-2000)

- BOREHOLE SAMPLE LOCATION (10/11/2000) 曲.TP-312 - TEST PIT SAMPLE LOCATION (10/17/2000)

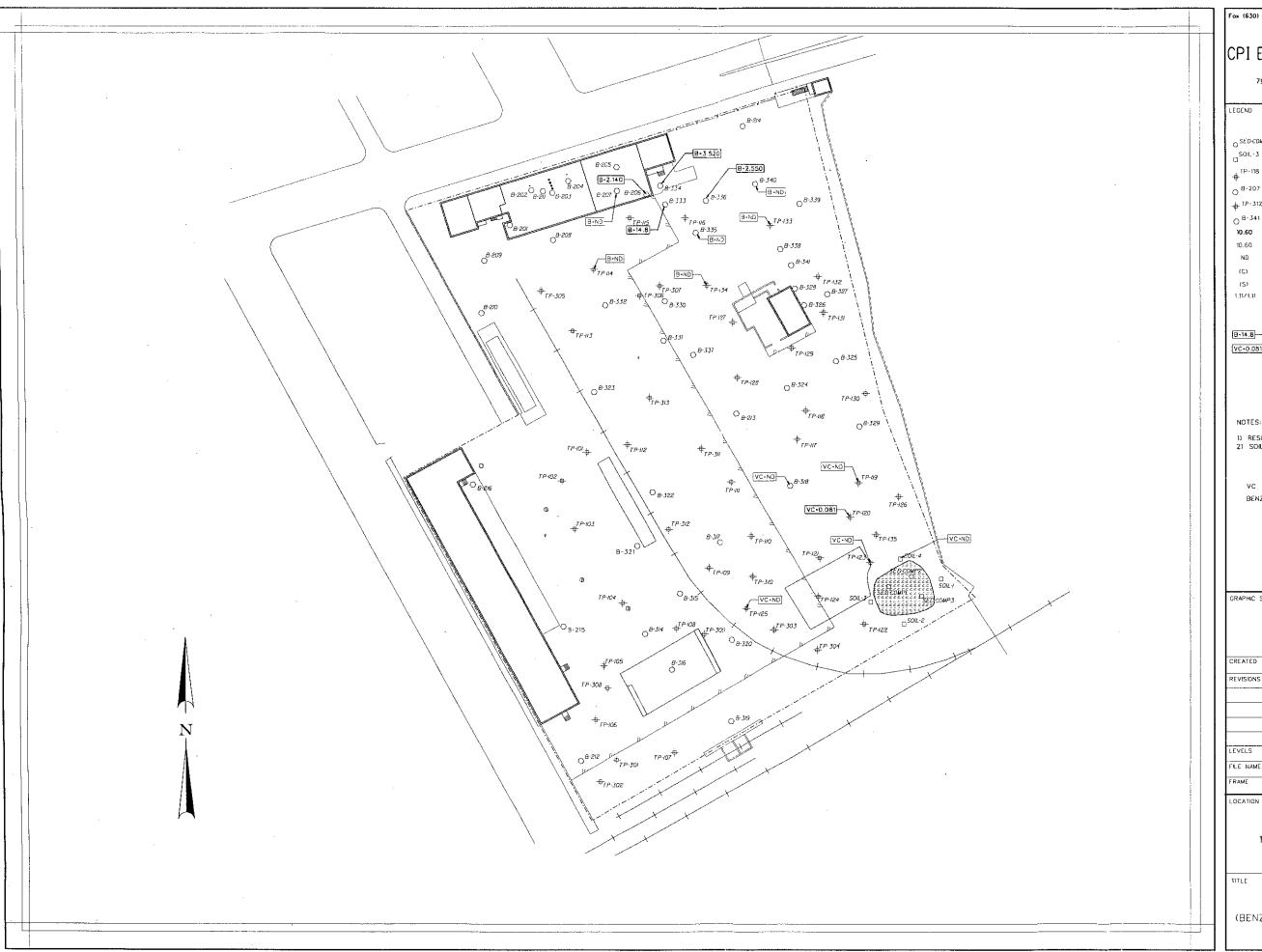
O B-341 - BOREHOLE SAMPLE LOCATION (10/24/2000)

		.	
EVISIONS			
VELS		 	
LE NAME	TP-FIG.DGN	 	

PROJ. NO. E05-73.01-199 FRAMÉ FR1-LG.DGN

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FIGURE 3: SAMPLE LOCATIONS MAP



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- SEDIMENT SAMPLE LOCATION (3/17/2000)

- SURFACE SAMPLE LOCATION (3-17-2000)

- TEST PIT SAMPLE LOCATION (8-31-2000)

- BOREHOLE SAMPLE LOCATION (10/11/2000)

* TEST PIT SAMPLE LOCATION (10/17/2000) - BOREHOLE SAMPLE LOCATION (10/24/2000)

- DETECTED CONCENTRATION ABOVE SRO (MG/KG)

- NOT DETECTED

- CONCENTRATION DETECTED IN NATIVE SILTY CLAY

- CONCENTRATION DETECTED IN SURFACE SAMPLE

- DETECTED CONCENTRATION BELOW SRO (MG/KG)

- ANALYTICAL RESULTS OBTAINED FROM 2 SAMPLES WITHIN FILL MATERIAL COLLECTED FROM DIFFERENT DEPTHS; FIRST NUMBER REPRESENTS SHALLOWER DEPTH SAMPLE: SEE ANALYTICAL TABLES FOR CORRESPONDING DEPTHS

B-14.8 - DETECTED BENZENE (MG/KG)

VC-0.081 - DETECTED VINYL CHLORIDE (MG/KG)

1) RESULTS REPORTED AS MG/KG 2) SOIL REMEDIATION OBJECTIVES (MG/KG)

ING. INH. ING. INH. 3 0.06 65 0.08 BENZENE 200 1.5 4300 2.1

GRAPHIC SCALE

CREATED	11/04/2000	ORAWN HH/SAS	APVD MBP4
REVISIONS	i		
		•	

LEVELS 52/60

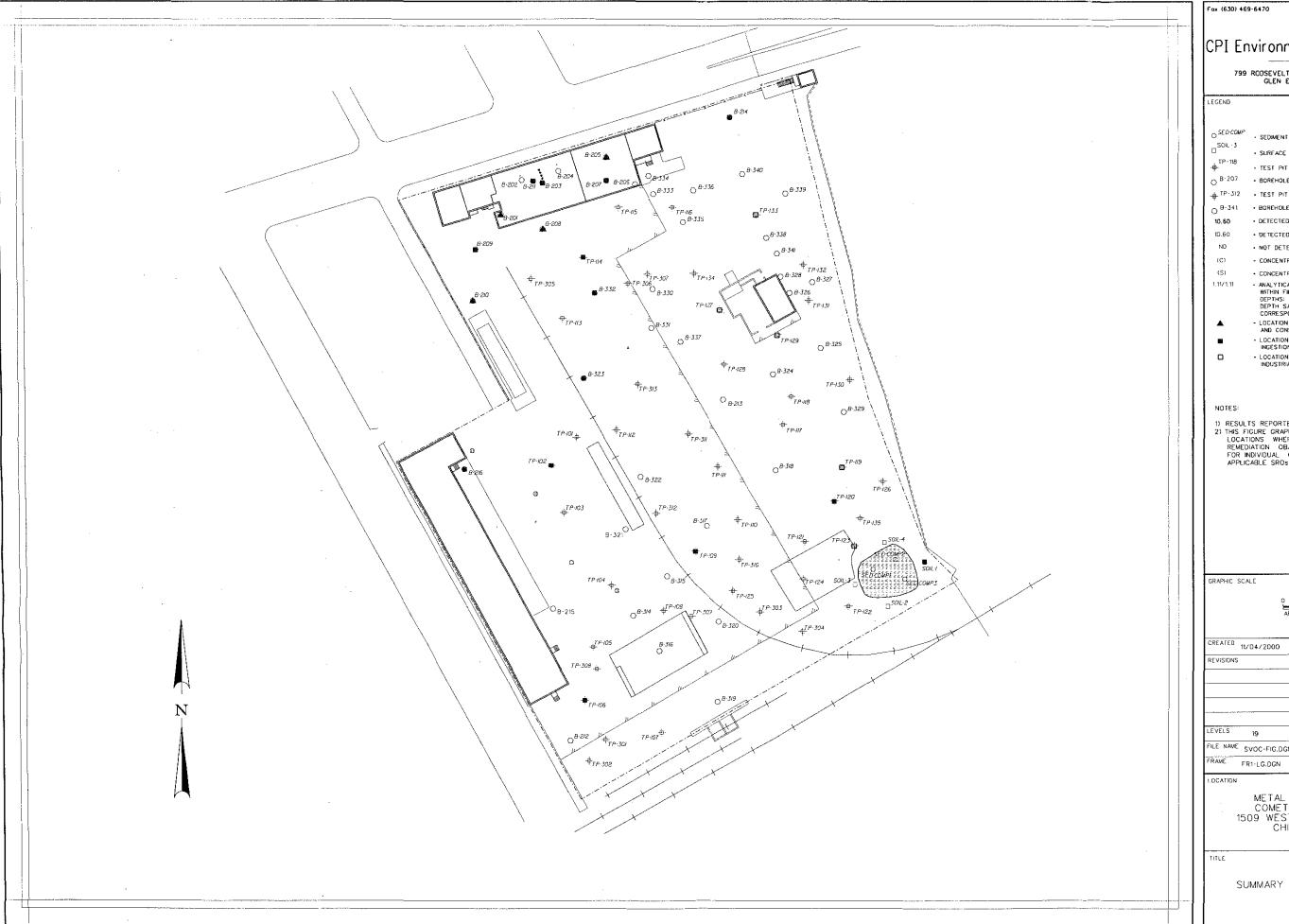
FILE NAME VOC-FIG.DGN

FRAME FR1-LG.DGN

PROJ NO. E-05-73-01-199

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FIGURE 4: SUMMARY OF VOC RESULTS (BENZENE AND VINYL CHLORIDE ONLY)



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799 RODSEVELT ROAD, BUILDING 6, SUITE 110 GLEN ELLYN, ILLENDIS 60137

LEGEND

- SEDIMENT SAMPLE LOCATION (3/17/2000)

- SURFACE SAMPLE LOCATION (3-17-2000)

. TEST PIT SAMPLE LOCATION (8-31-2000) - BOREHOLE SAMPLE LOCATION (10/11/2000)

- TEST PIT SAMPLE LOCATION (10/17/2000)

O B-341 - BOREHOLE SAMPLE LOCATION (10/24/2000)

- DETECTED CONCENTRATION ABOVE SRO (MG/KG)

- DETECTED CONCENTRATION BELOW SRO (MG/KG)

NOT DETECTED

- CONCENTRATION DETECTED IN NATIVE SILTY CLAY

- CONCENTRATION DETECTED IN SURFACE SAMPLE

ANALYTICAL RESULTS OBTAINED FROM 2 SAMPLES WITHIN FILL MATERIAL COLLECTED FROM DIFFERENT DEPTHS: FIRST NUMBER REPRESENTS SHALLOWER DEPTH SAMPLE: SEE ANALYTICAL TABLES FOR CORRESPONDING DEPTHS

- LOCATION EXCEEDS INDUSTRIAL COMMERCIAL AND CONSTRUCTION WORKER INGESTION SRO

- LOCATION EXCEEDS INDUSTRIAL-COMMERCIAL INGESTION EXPOSURE ROUTE SRO ONLY

LOCATION WHERE DETECTION LIMIT EXCEEDS INDUSTRIAL-COMMERCIAL INGESTION ROUTE SRO

NOTES:

1) RESULTS REPORTED AS MG/KG 1) RESULTS REPORTED AS MG/RG
2) THIS FIGURE GRAPHICALLY DISPLAYS SAMPLING
LOCATIONS WHERE PNAS EXCEEDED TIER 1 SOIL
REMEDIATION OBJECTIVES (SROS), SEE TABLE 2
FOR INDIVIDUAL COMPOUND RESULTS AND
APPLICABLE SROS.

GRAPHIC SCALE

REVISIONS		
	11	
	- tota-	

DRAWN HH/SAS APVD

LEVELS

FILE NAME SVOC-FIG.DGN

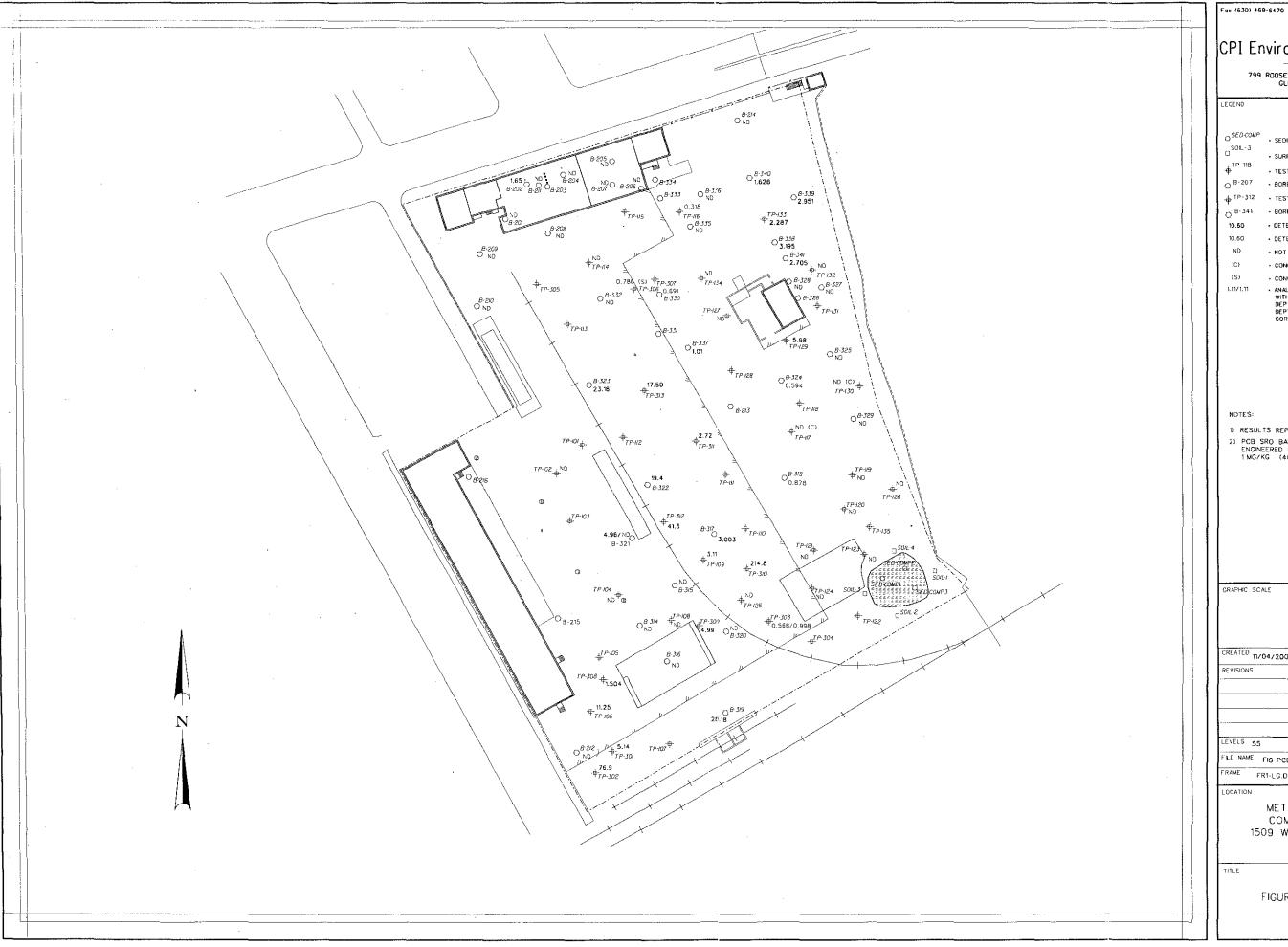
FRAME FR1-LG.DGN PROJ. NO. E-05-73-01-199

19

t.OCATION

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FIGURE 5: SUMMARY OF SVOC RESULTS



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CPI Environmental Services, Inc.

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· SEDIMENT SAMPLE LOCATION (3/17/2000)

- SURFACE SAMPLE LOCATION (3-17-2000)

TEST PIT SAMPLE LOCATION (8-31-2000)

- BOREHOLE SAMPLE LOCATION (10/11/2000)

- TEST PIT SAMPLE LOCATION (10/17/2000)

- BOREHOLE SAMPLE LOCATION (10/24/2000) - DETECTED CONCENTRATION ABOVE SRO (MG/KG)

- DETECTED CONCENTRATION BELOW SRO (MG/KG)

- NOT DETECTED

. CONCENTRATION DETECTED IN NATIVE SILTY CLAY

. CONCENTRATION DETECTED IN SURFACE SAMPLE

ANALYTICAL RESULTS OBTAINED FROM 2 SAMPLES WITHIN FILL MATERIAL COLLECTED FROM DIFFERENT DEPTHS: FIRST NUMBER REPRESENTS SHALLOWER DEPTH SAMPLE: SEE ANALYTICAL TABLES FOR CORRESPONDING DEPTHS

1) RESULTS REPORTED AS MG/KG

PCB SRO BASED ON HIGH OCCUPANCY WITH NO ENGINEERED BARRIER CLEANUP OBJECTIVE OF 1 MG/KG (40 CFR 761.61)

CRAPHIC SCALE

CREATED 11/04/2000 DRAWN HH/SAS APVD

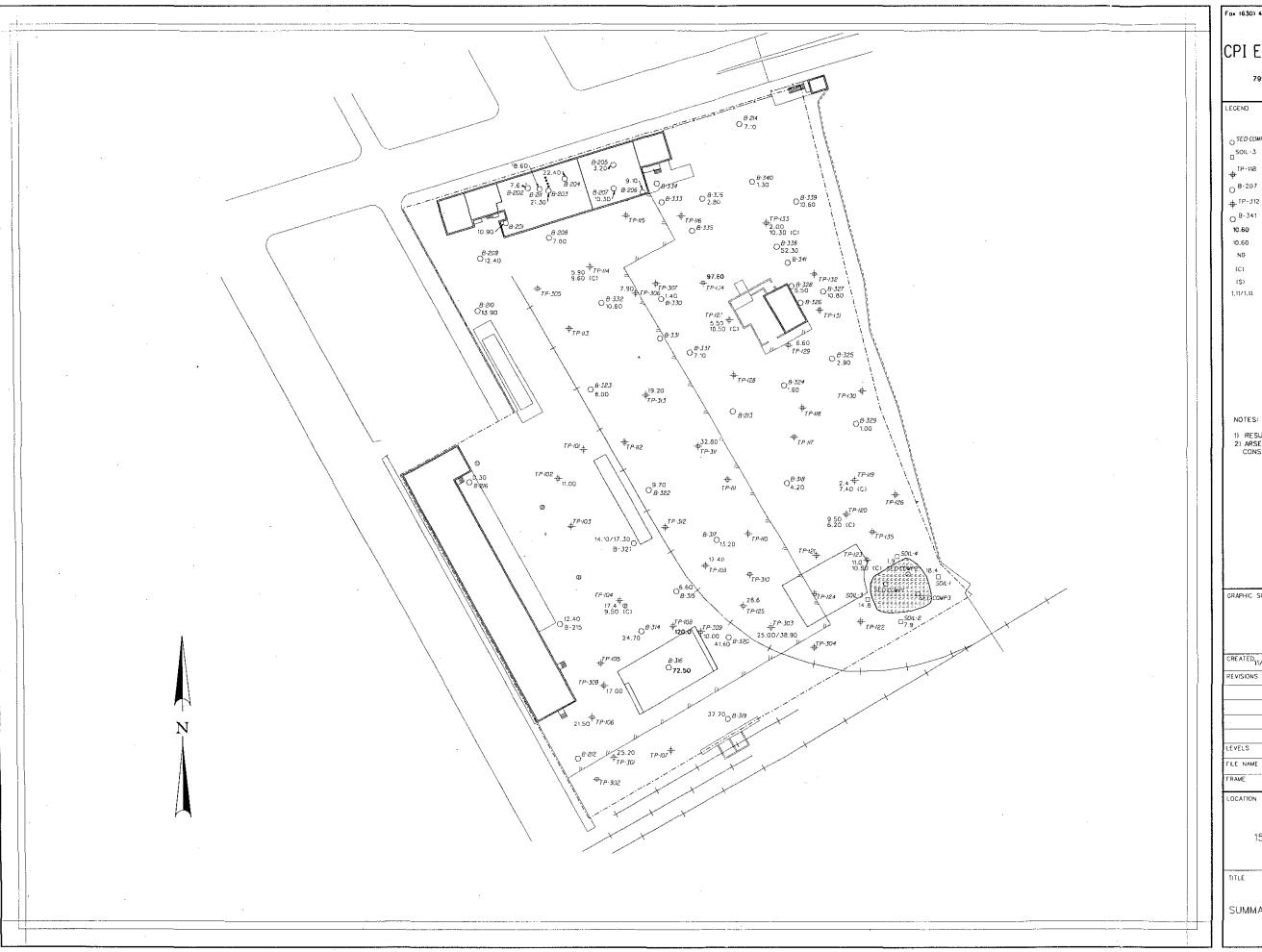
FILE NAME FIG-PCB.DCN

FRAME FR1-LG.DGN

PROJ. NO. E-05-73-01-199

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FIGURE 6. SUMMARY OF PCB RESULTS



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CPI Environmental Services, Inc.

799 ROOSEVELT ROAD, BUILDING 6, SUITE 110 GLEN ELLYN, ILLINDIS 60137

- SEDIMENT SAMPLE LOCATION (3/17/2000)

- SURFACE SAMPLE LOCATION (3-17-2000)

. TEST PIT SAMPLE LOCATION (8-31-2000)

- BOREHOLE SAMPLE LOCATION (10/11/2000) - TEST PIT SAMPLE LOCATION (10/17/2000)

- BOREHOLE SAMPLE LOCATION (10/24/2000)

- DETECTED CONCENTRATION ABOVE SRO (MC/KG) 10.60

10.60 - DETECTED CONCENTRATION BELOW SRO (MG/KG)

- NOT DETECTED

- CONCENTRATION DETECTED IN NATIVE SILTY CLAY

- CONCENTRATION DETECTED IN SURFACE SAMPLE

- CONCENTRATION DETECTED IN SOME SAMPLES
WITHIN FILL MATERIAL COLLECTED FROM DEFFRENT
DEPTHS: FIRST NUMBER REPRESENTS SHALLOWER
DEPTH SAMPLES SEE ANALYTICAL TABLES FOR
CORRESPONDING DEPTHS

1) RESULTS REPORTED AS MG/KG 2) ARSENIC CONCENTRATIONS COMPARED TO CONSTRUCTION WORKER TIER 1 SRO OF 61 MG/KG

GRAPHIC SCALE

20 40 APPROXIMATE FEET

CREATED 11/04/2000 DRAWN HH/SAS REVISIONS

LEVELS 49/57

FILE NAME ARSENIC-FIG.DGN

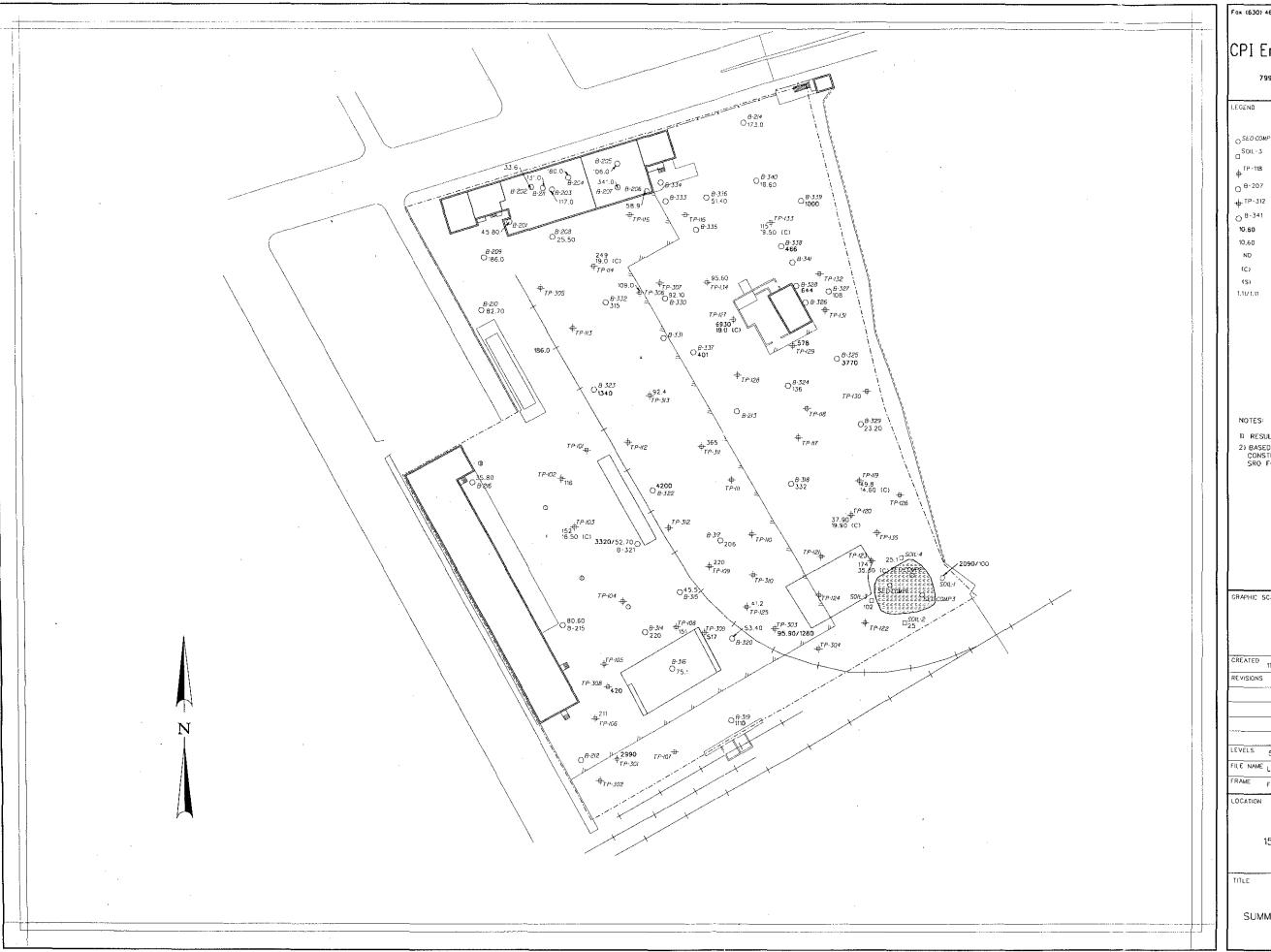
FRAME FR1-LG.DGN

PROJ. NO. E05-73-01-199

LOCATION

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FIGURE 7: SUMMARY OF TOTAL ARSENIC RESULTS



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O SEO-COMP - SEDIMENT SAMPLE LOCATION (3/17/2000)

- SURFACE SAMPLE LOCATION (3-17-2000)

- TEST PIT SAMPLE LOCATION (8-31-2000)

- BOREHOLE SAMPLE LOCATION (10/11/2000) - TEST PIT SAMPLE LOCATION (10/17/2000)

- BOREHOLE SAMPLE LOCATION (10/24/2000)

- DETECTED CONCENTRATION ABOVE SRO (MG/KG)2 - DETECTED CONCENTRATION BELOW SRO (MG/KG)2

ND - NOT DETECTED

. CONCENTRATION DETECTED IN NATIVE SILTY CLAY

(2)

- CONCENTRATION DETECTED IN SURFACE SAMPLE

ANALYTICAL RESULTS OBTAINED FROM 2 SAMPLES WITHIN FILL MATERIAL COLLECTED FROM DIFFEREN DEPTHS: FIRST NUMBER REPRESENTS SHALLOWER DEPTH SAMPLES SEE ANALYTICAL TABLES FOR CORRESPONDING DEPTHS

1) RESULTS REPORTED AS MG/KG

2) BASED ON INDUSTRIAL-COMMERCIAL AND CONSTRUCTION WORKER INCESTION TIER 1 SRO FOR TOTAL LEAD OF 400 MG/KG

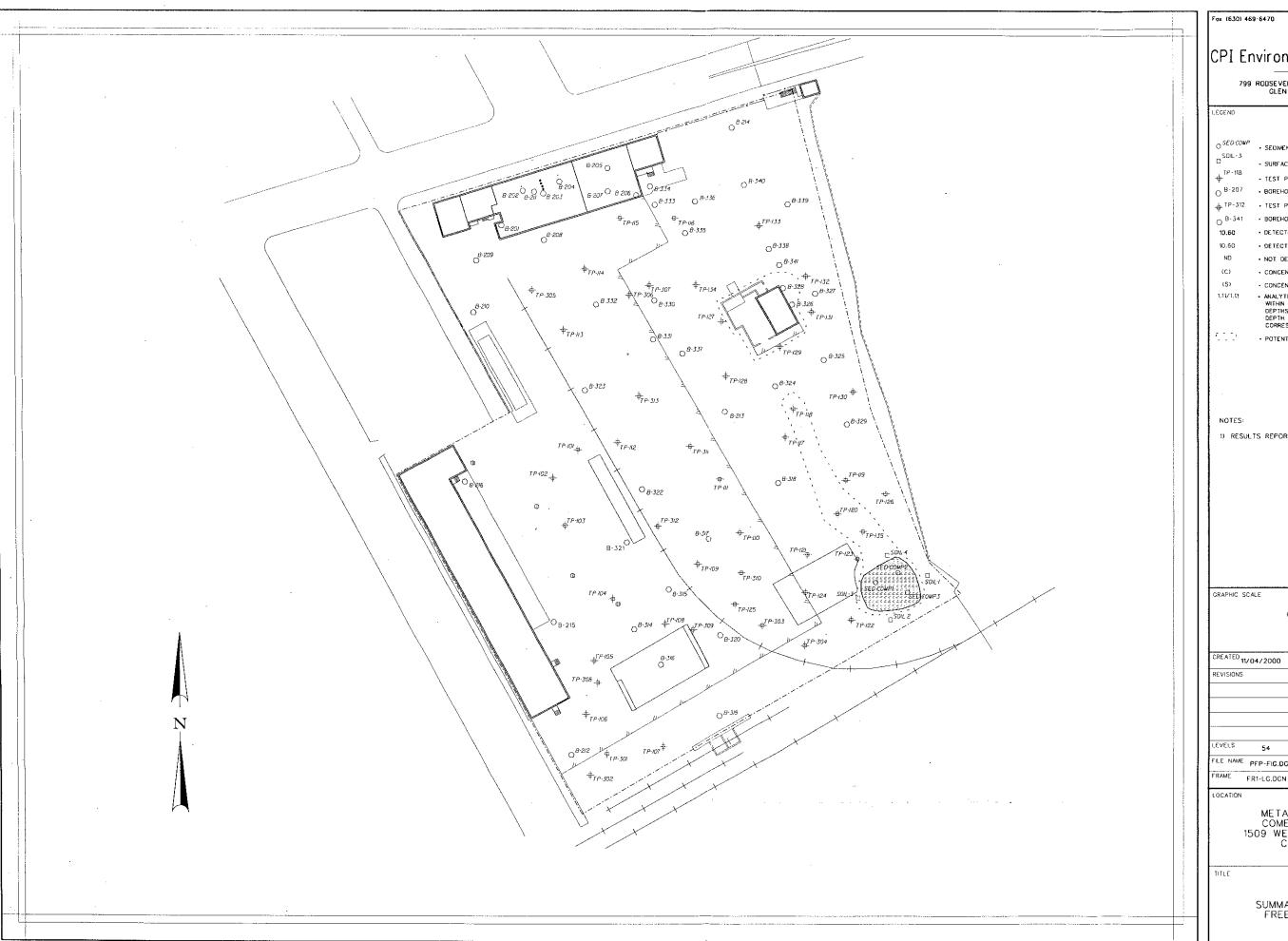
GRAPHIC SCALE

CKEATED	11/04/2000	DRAWN HH/SAS	MBP.
REVISIONS			
		11012	-14.00
151			
LEVELS	51/59		
FILE NAME	LEAD-FIG.DGN		
FRAME	FR1-LG.DGN	PROJ. NO.E-	05-73-01-199

LOCATION

METAL MANAGEMENT, INC COMETCO CORPORATION 1509 WEST CORTLAND STREET CHICAGO, ILLINOIS

FIGURE 8: SUMMARY OF TOTAL LEAD RESULTS



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Phone (630) 469-5340

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799 RODSEVELT ROAD, BUILDING 6, SUITE 110 GLEN ELLYN, ILLINOIS 60137

LEGEND

O SED-COMP - SEDIMENT SAMPLE LOCATION (3/17/2000)

SOIL-3

- SURFACE SAMPLE LOCATION (3-17-2000)

- TEST PIT SAMPLE LOCATION (8-31-2000) O 8-207

- BOREHOLE SAMPLE LOCATION (10/11/2000) . TEST PIT SAMPLE LOCATION (10/17/2000)

- BOREHOLE SAMPLE LOCATION (10/24/2000)

10.60

+ DETECTED CONCENTRATION ABOVE SRO (MG/KG) - DETECTED CONCENTRATION BELOW SRO (MG/KG)

. CONCENTRATION DETECTED IN NATIVE SILTY CLAY

- CONCENTRATION DETECTED IN SURFACE SAMPLE

- CONCENTRATION DETECTED AS SOM AND SAMPLES
WITHIN FILL MATERIAL COLLECTED FROM DIFFERENT
DEPTHS: FIRST NUMBER REPRESENTS SHALLOWER
DEPTH SAMPLE: SEE ANALYTICAL TABLES FOR
CORRESPONDING DEPTHS

- POTENTIAL FREE-PRODUCT AREA

NOTES:

1) RESULTS REPORTED AS MG/KG

CRAPHIC SCALE



REVISIONS LEVELS FILE NAME PEP-FIG.DGN FRAME PROJ. NO. E-05-73-01-199 FR1-LG.DGN

DRAWN HH/SAS APVO

LOCATION

METAL MANAGEMENT, INC COMETCO CORPORATION 1509 WEST CORTLAND STREET CHICAGO, ILLINOIS

TITLE

FIGURE 9: SUMMARY OF POTENTIAL FREE PRODUCT AREAS

Table Legend

Notes: All concentrations are expressed in mg/kg (ppm).

Bolded values exceed most stringent SRO

NE= SRO Not Established

ND= Not Detected at the laboratory method detection limit. See analytical report in Appendix B for detection limits.

NA= Not Analyzed

ND*= Detection limit exceeds SRO

TP= Test Pit

B= Boring

- (1) Soil Remediation Objectives (SRO) based on IAC Title 35 Part 742 Tiered Approach to Corrective Actions, unless otherwise noted; the most stringent value for Industrial-Commercial and Construction Worker standards is expressed.
- (2) Industrial-Commercial Inhalation
- (3) Construction Worker Inhalation
- (4) Industrial-Commercial Ingestion
- (5) Construction Worker Ingestion
- (6) Tier 2 determination
- (7) Analyte detected in method blank; concentration detected is less than 10 times the associated blank value; analyte should be considered not detected.
- (8) Analyte detected in method blank; concentration detected is more than 10 times the associated blank level
- (9) Background concentration
- (10) SRO based on the presence of trivalent chromium

Table 1. Summary of VOC Analytical Results for Soil Samples

Sample I.D.	S-102	S-103	S-104	S-105	S-107	S-109	S-111	S-112	Soil
Sample Location	TP-102	TP-104	TP-104	TP-106	TP-108	TP-109	TP-114	TP-114	Remediation
Soil Type	Clay	Fill	Clay	Fill	Fill	Fill	Fill	Clay	
Analyte			TPS:			indirio de esta Transferencia			Objectives ⁽¹⁾
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	100,000(2,3)
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	1.5(2)
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	120,000(5)(6)
Carbon disulfide	ND	0.014	ND	ND	0.049	0.011	ND	ND	9.0 ⁽³⁾
Chloroform	0.024	0.009	0.020	0.006	0.026	0.006	0.015	ND_	0.54 ⁽²⁾
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	440 ⁽⁵⁾⁽⁶⁾
1,1-Dichloroethane	ND	ND	ND	ND	ND	0.007	ND	ND	130 ⁽³⁾
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.034	ND	ND	I,200 ⁽²⁾
Ethyl benzene	ND	ND	ND	ND	ND	ND	0.005	ND	58 ⁽³⁾
4-Methyl-2-pentanone	ND	ND	ND	ND	ND	ND	ND	ND	16,000 ⁽⁵⁾⁽⁶⁾
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	24 ⁽²⁾
Tetrachloroethene	0.008	ND	ND	ND	0.017	0.019	0.011	ND	20 ⁽²⁾
Toulene	ND	ND	ND	ND	0.005	ND	ND	ND	42 ⁽³⁾
1,1,1-Trichloroethane	ND	0.008	0.009	ND	0.005	0.006	0.009	ND	1,200(2,3)
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	8.9 ⁽²⁾
Vinyl Chloride	ND	ND	ND	ND	ND	0.058	ND	ND	0.06 ⁽²⁾
Xylenes (total)	ND	0.030	ND	ND	0.016	ND	0.005	ND	410(2,3)

Table 1. Summary of VOC Analytical Results for Soil Samples (Continued)

Sample I.D.	S-116	S-117	S-118	S-119	S-121	S-122	S-124	S-127	Soil
Sample Location	TP-119	TP-119	TP-120	TP-120	TP-123	TP-123	TP-125	TP-127	Remediation
Soil Type	Fill	Clay	Fill	Clay	Fill	Clay	Fill	Fill	
Analyte		res esta fiet Telforios		sekaji užiju, južiju Rejudija Augusta					Objectives ⁽¹⁾
Acetone	ND	ND	ND	0.225	0.479	ND	ND	ND	100,000 ^(2,3)
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	1.5 ⁽²⁾
2-Butanone	ND	ND	ND	0.010	0.043	ND	ND	ND	120,000(5)(6)
Carbon disulfide	ND	ND	ND	ND	0.006	ND	ND	0.006	9.0 ⁽³⁾
Chloroform	0.016	0.008	ND	ND	0.011	ND	ND	ND	0.54 ⁽²⁾
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	440 ⁽⁵⁾⁽⁶⁾
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	130 ⁽³⁾
cis-1,2-Dichloroethene	ND	ND	1.100	ND	0.008	ND	ND	0.006	1,200 ⁽²⁾
Ethyl benzene	ND	ND	0.014	ND	ND	ND	ND	0.006	. 58 ⁽³⁾
4-Methyl-2-pentanone	ND	ND	ND	ND	ND	ND	ND	ND	16,000 ⁽⁵⁾⁽⁶⁾
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	24 ⁽²⁾
Tetrachloroethene	0.011	ND	0.070	ND	0.007	ND	ND	ND	20 ⁽²⁾
Toulene	ND	ND	0.016	ND	0.006	ND	ND	0.027	42 ⁽³⁾
1,1,1-Trichloroethane	0.005	ND	ND	ND	ND	ND	ND	ND	1,200 ^(2,3)
Trichloroethene	ND	ND	0.065	ND	0.011	ND	ND	ND	8.9 ⁽²⁾
Vinyl Chloride	ND	ND.	0.081	ND	ND	ND	ND	ND	0.06 ⁽²⁾
Xylenes (total)	ND	ND	0.085	ND	0.008	ND	ND	0.041	410 ^(2,3)

Table 1. Summary of VOC Analytical Results for Soil Samples (Continued)

Sample I.D.	S-128	S-129	S-133	S-134	S-135	B-201	B-202	B-203	C.d
Sample Location	TP-127	TP-129	TP-133	TP-133	TP-134	B-201	B-202	B-203	Soil
Soil Type	Clay	Fill	Fill	Clay	Fill	Fill	Fill	Fill	Remediation
Analyte			indifference An Standard				juranj.		Objectives ⁽¹⁾
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	$100,000^{(2,3)}$
Benzene	ND	0.016	ND	ND	ND	ND	ND	0.0062	1.5 ⁽²⁾
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	120,000(5)(6)
Carbon disulfide	ND	0.028	ND	ND	0.009	ND	ND	0.0083	$9.0^{(3)}$
Chloroform	ND	0.009	ND	0.007	0.015	ND	ND	ND	0.54 ⁽²⁾
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	440 ⁽⁵⁾⁽⁶⁾
1,1-Dichloroethane	ND	ND	ND	ND	ND	ИD	ND	ND	130 ⁽³⁾
cis-1,2-Dichloroethene	ND	0.005	ND	ND	ND	ND	ND	ND	1,200 ⁽²⁾
Ethyl benzene	ND	0.013	ND	ND	ND	ND	ND	ND	58 ⁽³⁾
4-Methyl-2-pentanone	ND	ND	ND	ND	ND	ND	ND	ND	16,000(5)(6)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	24 ⁽²⁾
Tetrachloroethene	ND	0.013	ND	ND	0.012	ND	ND	ND	20 ⁽²⁾
Toulene	ND	0.763	ND	ND	ND	ND	ND	ND	42 ⁽³⁾
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1,200 ^(2,3)
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	8.9 ⁽²⁾
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	0.06 ⁽²⁾
Xylenes (total)	ND	0.084	ND	ND	0.006	ND	ND	ND	410 ^(2,3)

Table 1. Summary of VOC Analytical Results for Soil Samples (Continued)

Sample I.D.	B-204	B-206	B-207	B-208	B-209	B-211	B-214	B-215	Soil
Sample Location	B-204	B-206	B-207	B-208	B-209	B-211	B-214	B-215	
Soil Type	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Remediation
Analyte	ivijek (cor	Objectives ⁽¹⁾							
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	$100,000^{(2,3)}$
Benzene	ND	2.140	ND	ND	0.013	ND	ND	ND	1.5 ⁽²⁾
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	120,000 ⁽⁵⁾⁽⁶⁾
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	9.0 ⁽³⁾
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	0.54 ⁽²⁾
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	440 ⁽⁵⁾⁽⁶⁾
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	130 ⁽³⁾
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	1,200 ⁽²⁾
Ethyl benzene	ND	1.080	ND	ND	ND	ND	ND	ND	58 ⁽³⁾
4-Methyl-2-pentanone	ND	ND	ND	ND	ND	ND	ND	ND	16,000 ⁽⁵⁾⁽⁶⁾
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	24 ⁽²⁾
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	20 ⁽²⁾
Toulene	ND	0.890	ND	ND	0.006	ND	ND	ND	42 ⁽³⁾
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1,200(2,3)
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	8.9 ⁽²⁾
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	$0.06^{(2)}$
Xylenes (total)	ND	3.590	ND	ND	0.005	ND	ND	ND	410(2,3)

Table 1. Summary of VOC Analytical Results for Soil Samples (Continued)

Sample I.D.	B-216	TP-301	TP-303	TP-308	TP-309	TP-311	B-314	B-316	Soil
Sample Location	B-216	TP-301	TP-303	TP-308	TP-309	TP-311	B-314	B-316	
Soil Type	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Remediation Objectives ⁽¹⁾
Analyte	in said								
Acetone	ND	0.390	0.603	0.132	0.641	ND	ND	0.208	100,000(2,3)
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	1.5 ⁽²⁾
2-Butanone	ND	0.740	ND	ND	0.090	ND	ND	0.033	120,000 ⁽⁵⁾⁽⁶⁾
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND_	9.0 ⁽³⁾
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	0.54 ⁽²⁾
Chloromethane	ND	0.018	ND	ND	ND	ND	ND	ND	440 ⁽⁵⁾⁽⁶⁾
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	130 ⁽³⁾
cis-1,2-Dichloroethene	ND	ND	0.210	ND	0.039	ND	ND	ND	1,200 ⁽²⁾
Ethyl benzene	ND	ND	0.011	ND	ND	ND	ND	ND	58 ⁽³⁾
4-Methyl-2-pentanone	ND	0.363	0.243	ND	0.078	ND	ND	ND	16,000 ⁽⁵⁾⁽⁶⁾
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	24 ⁽²⁾
Tetrachloroethene	ND	ND	ND	ND	0.042	0.057	ND	ND	20 ⁽²⁾
Toulene	ND	ND	0.014	ND	0.028	ND	ND	ND	42 ⁽³⁾
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1,200 ^(2,3)
Trichloroethene	ND	ND	ND	ND	0.005	ND	ND	ND	8.9 ⁽²⁾
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	0.06 ⁽²⁾
Xylenes (total)	ND	ND	0.052	ND	0.020	0.010	ND	0.036	410(2,3)

Table 1. Summary of VOC Analytical Results for Soil Samples (Continued)

Sample I.D.	B-318	B-319	B-320	B-321	B-321	B-323	B-332	B-333	Soil
Sample Location	B-318	B-319	B-320	B-321	B-321	B-323	B-332	B-333	Remediation
Soil Type	Fill	Fill	Fill	Fill (0.5')	Fill (2.5')	Fill	Fill	Fill	Objectives ⁽¹⁾
Analyte	· · · · · · · · · · · · · · · · · · ·								
Acetone	0.097	0.784	0.229	0.161	0.090	0.730	ND	ND	100,000(2,3)
Benzene	ND	ND	ND	0.010	ND	0.076	ND	14.800	1.5(2)
2-Butanone	0.034	0.141	0.061	0.045	0.023	0.136	ND	ND	120,000(5)(6)
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	9.0 ⁽³⁾
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	0.54 ⁽²⁾
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	440 ⁽⁵⁾⁽⁶⁾
1,1-Dichloroethane	ND	ND	ND	ND	ND	0.015	ND	ND	130 ⁽³⁾
cis-1,2-Dichloroethene	0.090	0.022	ND	0.011	ND	0.012	ND	ND	1,200 ⁽²⁾
Ethyl benzene	ND	0.054	ND	ND	ND	0.458	ND	31.200	58 ⁽³⁾
4-Methyl-2-pentanone	ND	ND	ND	ND	ND	ND	ND	ND	16,000(5)(6)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	24 ⁽²⁾
Tetrachloroethene	0.420	0.054	ND	ND	ND	0.033	ND	ND	20 ⁽²⁾
Toulene	0.073	0.307	ND	0.017	ND	1.020	ND	1.860	42 ⁽³⁾
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1,200 ^(2,3)
Trichloroethene	0.030	0.008	ND	0.010	ND	0.014	ND	ND	8.9 ⁽²⁾
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND.	$0.06^{(2)}$
Xylenes (total)	0.018	0.269	ND	0.010	ND	1.830	ND	24.400	410 ^(2,3)

Table 1. Summary of VOC Analytical Results for Soil Samples (Continued)

Sample I.D.	B-334	B-335	B-336	B-337	B-340	B-1	B-2	B-3	Soil
Sample Location	B-334	B-335	B-336	B-337	B-340	B-1	B-2	B-3	Remediation
Soil Type	Fill	Fill	Fill	Fill	Fill	Clay	Fill	Fill	
Analyte	EFK.	i indiana i A igura a		A CAMPANIAN A PERMITAN		fillar	îvetê e		Objectives ⁽¹⁾
Acetone	ND	ND	ND	ND	ND	NA	NA	NA	100,000(2,3)
Benzene	3.520	ND ·	2.550	ND	ND	ND	ND	ND	1.5 ⁽²⁾
2-Butanone	ND	ND	ND	ND	ND	NA_	NA	ΝA	120,000 ⁽⁵⁾⁽⁶⁾
Carbon disulfide	ND	ND	ND	ND	ND	NA_	NA	NA	9.0 ⁽³⁾
Chloroform	ND	ND	ND	ND	ND	NA	NA	NA	0.54 ⁽²⁾
Chloromethane	ND	ND	ND	ND	ND	NA	NA	NA	440 ⁽⁵⁾⁽⁶⁾
1,1-Dichloroethane	ND	ND	ND	ND	ND	NA_	NA	NA	130 ⁽³⁾
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	NA	NA	NA	1,200 ⁽²⁾
Ethyl benzene	13.900	1.750	11.100	0.142	ND	ND	ND	ND	58 ⁽³⁾
4-Methyl-2-pentanone	ND	ND	ND	ND	ND	NA	NA	NA	16,000 ⁽⁵⁾⁽⁶⁾
Methylene chloride	ND	ND	ND	ND	ND	NA	NA	NA	24 ⁽²⁾
Tetrachloroethene	0.214	ND.	ND	ND	ND	NA	NA	NA	20 ⁽²⁾
Toulene	1.550	0.248	0.924	0.172	ND	ND	ND	ND	42 ⁽³⁾
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	NA	NA	NA	1,200 ^(2,3)
Trichloroethene	ND	ND	ND	ND	ND	NA	NA	NA	8.9 ⁽²⁾
Vinyl Chloride	ND	ND	ND	ND	ND	NA	NA	NA	$0.06^{(2)}$
Xylenes (total)	32.000	4.290	4.280	0.591	ND	ND	ND	ND	410(2,3)

Table 1. Summary of VOC Analytical Results for Soil Samples (Continued)

Sample I.D.	B-4	B-5	B-6	Soil-1	Soil-1	Soil-2	Soil-3	Soil-4	Soil
Sample Location	B-4	B-5	B-6	0-0.5'	2'	0-0.5	0-0.5'	0-0.5'	Remediation
Soil Type	Clay	Clay	Clay	Fill	Fill	Fill	Fill	Fill	
Analyte	aren Leviko		ng rang		Objectives ⁽¹⁾				
Acetone	NA	NA	NA	ND	NA	ND	ND	ND	100,000(2,3)
Вепzene	ND	ND	ND	ND	NA	ND	ИD	ND	1,5 ⁽²⁾
2-Butanone	NA	NA	NA	ND	NA	ND	ND	ND	120,000(5)(6)
Carbon disulfide	NA	NA	NA	ND	NA	ND	ND	ND	9.0 ⁽³⁾
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	0.54 ⁽²⁾
Chloromethane	NA	NA	NA	ND	NA	ND	ND	ND	440 ⁽⁵⁾⁽⁶⁾
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	130 ⁽³⁾
cis-1,2-Dichloroethene	NA	NA	NA	ND	NA	ND	0.153	ND	1,200 ⁽²⁾
Ethyl benzene	ND	ND	ND	ND	NA	ND	ND	ND	58 ⁽³⁾
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA	16,000 ⁽⁵⁾⁽⁶⁾
Methylene chloride	NA	NA	NA	NA	NA	NA	NA	NA	24 ⁽²⁾
Tetrachloroethene	NA	NA	NA	ND	NA	ND	0.262	ND	20(2)
Toulene	ND	ND	ND	ND	NA	ND	ND	ND	42 ⁽³⁾
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	1,200 ^(2,3)
Trichloroethene	NA	NA	NA	ND	NA	ND	0.030	ND	8.9 ⁽²⁾
Vinyl Chloride	NA	NA	NA	ND	NA	ND	ND -	ND	0.06 ⁽²⁾
Xylenes (total)	ND	ND	ND	ND	NA	ND	ND	ND	410(2,3)

Table 1. Summary of VOC Analytical Results for Soil Samples (Continued)

Sample L.D.	S-1	S-2	S-3	S-4	S-5	自長期においずは甲折います。5/1	Soil
Sample Location	S-1	S-2	S-3	S-4	S-5	[12] 推薦60° [1] 共享整数字 [1] 数 [14] [15]	Remediation
Soil Type	Fill	Fill	Fill	Fill	Fill		
Analyte	his 74			TESC:			Objectives ⁽¹⁾
Acetone	0.013	ND	ND	9.500	ND	2000年,2000年,2000年,2000年,2000年,	100,000(2,3)
Benzene	NA.	NA	NA	NA	NA		1.5 ⁽²⁾
2-Butanone	NA	NA	NA.	NA	NA		120,000(5)(6)
Carbon disulfide	ND	ND	ND	ND	ND		9.0 ⁽³⁾
Chloroform	ND	0.006	ND	ND	0.006		0.54 ⁽²⁾
Chloromethane	NA	NA	NA	NA	NA		440 ⁽⁵⁾⁽⁶⁾
1,1-Dichloroethane	NA	NA	NA	NA	NA		130 ⁽³⁾ .
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND		1,200(2)
Ethyl benzene	NA	NA	NA	NA	NA		58 ⁽³⁾
4-Methyl-2-pentanone	ND	ND	ND	1.400	ND	Fine a ment of state	I 6,000 ⁽⁵⁾⁽⁶⁾
Methylene chloride	0.007 ⁽⁷⁾	0.04 ⁽⁷⁾	ND	0.98(8)	$0.026^{(7)}$		24 ⁽²⁾
Tetrachloroethene	NA	NA	NA_	NA.	NA		20 ⁽²⁾
Toulene	ND	ND	ND	0.580	ND	A. A. A. E. M. M. M. A. A. A. A. A. A. A. A. A. A. A. A. A.	42 ⁽³⁾
1,1,1-Trichloroethane	NA	NA	NA	NA	NA		1,200 ^(2,3)
Trichloroethene	ND	ND	ND	0.610	ND		8.9 ⁽²⁾
Vinyl Chloride	NA	NA	NA	NA	NA		$0.06^{(2)}$
Xylenes (total)	ND	ND	ND	1.100	ND	ing to be still draw.	410 ^(2,3)

Table 2. Summary of SVOC Analytical Results for Soil Samples

Sample I.D.	S-101	S-103	S-104	S-105	S-107	S-109	S-111	S-112	Soil
Sample Location	TP-102	TP-104	TP-104	TP-106	TP-108	TP-109	TP-114	TP-114	Remediation
Soil Type	Fill	Fill	Clay	Fill	Fill	Fill	Fill	Clay	Objectives ⁽¹⁾
Analyte		varit						90. 64 2 1 1 1 1 1 1 3 1 5 1 1 5	
Acenaphthene	ND	ND	ND	ND	ND	ND	7.080	ND	120,000(4,5)
Acenaphthylene	ND	4,100 ⁽⁵⁾⁽⁶⁾							
Anthracene	0.472	ND	ND	1.030	ND	1.380	2.250	ND	610,000(4,5)
Benzo[a]anthracene	1.230	0.462	ND	1.460	ND	1.290	ND	ND	8(4)
Benzo[b]fluoranthene	1.170	0.397	ND	0.890	ND	1.230	ND	ND	8(4)
Benzo[k]fluoranthene	0.865	0.449	ND	1.340	ND	1.780	ND	ND	78 ⁽⁴⁾
Benzo[g,h,i]perylene	0.410	ND	ND	ND	ND	ND	ND	ND	6,100 ⁽⁵⁾⁽⁶⁾
Benzo[a]pyrene	1.070	0.391	ND	0.903	ND*	1.470	ND*	ND	0.8 ⁽⁴⁾
bis(2-Ethylhexyl)phthalate	ND	0.350	ND	1.280	ND	2.250	ND	ND	410 ⁽⁴⁾
Butylbenzylphthalate	ND	930 ^(2,3)							
4-Chloro-3-methylphenol	ND	7,390	ND	ND	21.500	ND	ND	ND	NE
4-Chlorophenyl-phenylether	ND	ND	ND	ND	ND	ND	ND	ND	NE
Chrysene	1.230	0.697	ND	1.970	ND	1.220	12,500	ND	780 ⁽⁴⁾
Dibenzo[a,h]anthracene	ND	ND	ND	0.479	ND*	ND	3.300	ND	0.8 ⁽⁴⁾
Dibenzofuran	0.427	ND	ND	ND	ND	ND	7.850	ND	NE
2,4-Dimethylphenol	ND	41,000(4,5)							
Di-n-butylphthalate	ND	2,300(2,3)							
Di-n-octylphthalate	ND	4,100 ⁽⁵⁾							
Fluoranthene	1.950	0.974	ND	2.960	ND	4.460	26.400	ND	82,000 ^(4,5)
Fluorene	ND	0.397	ND	0.534	ND	0.709	11.200	ND	82,000(4,5)
Indeno[1,2,3-cd]pyrene	0.408	ND	ND	ND	ND	ND	8.290	ND	8 ⁽⁴⁾
2-Methylnaphthalene	1.290	1.430	ND	1.650	ND	ND	59.200	ND	6,100 ⁽⁵⁾⁽⁶⁾
3&4-Methylphenol	ND	ND	- ND	ND	ND	ND	ND	ND	NE
Naphthalene	0.743	0.587	ND	0.845	ND	ND	7.710	ND	8,200 ⁽⁵⁾
Phenanthrene	2,680	1.640	ND	0.614	ND	4.850	25,800	ND	6,100 ⁽⁵⁾⁽⁶⁾
Phenol	ND	120,000 ⁽⁵⁾							
Pyrene	1.960	1.400	ND	3.210	ND	3.810	28.500	ND	61,000 ^(4,5)
1,2,4-Trichlorobenzene	ND	ND	ND	1.530	ND	ND	ND	ND	920 ⁽³⁾

Table 2. Summary of SVOC Analytical Results for Soil Samples (Continued)

Sample I.D.	S-116	S-117	S-118	S-119	S-121	S-122	S-124	S-127	Soil
Sample Location	TP-119	TP-119	TP-120	TP-120	TP-123	TP-123	TP-125	TP-127	Remediation
Soil Type	Fill	Clay	Fill	Clay	Fill	Clay	Fill	Fill	Objectives ⁽¹⁾
Analyte				loi a decido si Sul Agresio de de			. Projekti.		_
Acenaphthene	ND	ND	ND -	ND	ND	ND	ND	ND	120,000 ^(4,5)
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	4,100 ⁽⁵⁾⁽⁶⁾
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	610,000 ^(4,5)
Benzo[a]anthracene	ND	ND	14.000	ND	ND	ND	ND	ND	8 ⁽⁴⁾
Benzo[b]fluoranthene	ND	ND	21.600	ND	ND	ND	ND	1.130	8 ⁽⁴⁾
Benzo[k]fluoranthene	ND	ND	23.800	ND	ND	ND	ND	1.020	78 ⁽⁴⁾
Benzo[g,h,i]perylene	ND	ND	8.700	ND	ND	ND	ND	ND	6,100 ⁽⁵⁾⁽⁶⁾
Benzo[a]pyrene	ND*	ND	16.300	ND	ND*	ND	ND	ND*	0.8 ⁽⁴⁾
bis(2-Ethylhexyl)phthalate	ND_	ND	ND	ND	8.880	ND	1.370	4.760	410 ⁽⁴⁾
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	930 ^(2,3)
4-Chloro-3-methylphenol	ND	ND	ND	ND	3.360	ND	ND	ND	NE
4-Chlorophenyl-phenylether	ND	ND	ND	ND	ND	ND	ND	ND	NE
Chrysene	ND	ND	20.700	ND	ND	ND	ND	ND	780 ⁽⁴⁾
Dibenzo[a,h]anthracene	ND*	ND	5.000	ND	ND*	ND	ND	ND*	0.8 ⁽⁴⁾
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	NE
2,4-Dimethylphenol	ND_	ND	ND	ND	ND	ND	ND	ND	41,000 ^(4,5)
Di-n-butylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	2,300 ^(2,3)
Di-n-octylphthalate	ND	ND	ND	ND	ND	ND	ND	1.050	4,100 ⁽⁵⁾
Fluoranthene	ND	ND	23.900	ND	ND	ND	ND	2.680	. 82,000 ^(4,5)
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	82,000 ^(4,5)
Indeno[1,2,3-cd]pyrene	ND	ND	8.340	ND	ND	ND	ND	ND	8 ⁽⁴⁾
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	1.860	6,100 ⁽⁵⁾⁽⁶⁾
3&4-Methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	NE
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	8,200 ⁽⁵⁾
Phenanthrene	ND	ND	8.800	ND	ND	ND	ND	2.780	6,100 ⁽⁵⁾⁽⁶⁾
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	120,000 ⁽⁵⁾
Pyrene	ND	ND	14.900	ND	ND	ND	ND	2.720	61,000 ^(4,5)
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	920 ⁽³⁾

Table 2. Summary of SVOC Analytical Results for Soil Samples (Continued)

Sample I.D.	S-128	S-129	S-133	S-134	S-135	B-201	B-202	B-203	Soil
Sample Location	TP-127	TP-129	TP-133	TP-133	TP-134	B-201	B-202	B-203	Remediation
Soil Type	Clay	Fill	Fill	Clay	Fill	Fill	Fill	Fill	
Analyte						3 ²² (4 ¹² 64 13)			Objectives ⁽¹⁾
Acenaphthene	ND	ND	ND	ND	ND	10.500	ND	ND	120,000 ^(4,5)
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	4,100 ⁽⁵⁾⁽⁶⁾
Anthracene	ND	1.900	ND	ND	ND	76.000	ND	0.720	610,000 ^(4,5)
Benzo[a]anthracene	ND	2.490	ND	ND	ND	210.000	ND	3.380	8 ⁽⁴⁾
Benzo[b]fluoranthene	ND	2.260	ND	ND	ND	156.000	ND	4.050	8 ⁽⁴⁾
Benzo[k]fluoranthene	ND	2.660	ND	ND	ND	144.000	ND	2.010	78 ⁽⁴⁾
Benzo[g,h,i]perylene	ND	ND	ND	ND	ND	66.000	ND	2.640	6,100 ⁽⁵⁾⁽⁶⁾
Benzo[a]pyrene	ND	2.150	ND*	ND	ND	206.000	ND	3.290	0.8 ⁽⁴⁾
bis(2-Ethylhexyl)phthalate	ND	9.360	ND	ND	1.660	ND	ND	ND	410 ⁽⁴⁾
Butylbenzylphthalate	ND	19.200	ND	ND	ND	ND	ND	ND	930 ^(2,3)
4-Chloro-3-methylphenol	ND	ND	ND	ND	1.770	ND	ND	ND	_NE
4-Chlorophenyl-phenylether	ND	ND	ND	ND	ND	183.000	ND	ND	NE
Chrysene	ND	2.590	ND	ND	ND	35.500	ND	3.580	780 ⁽⁴⁾
Dibenzo[a,h]anthracene	ND	ND*	ND*	ND	ND	ND	ND	0.810	0.8 ⁽⁴⁾
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	NE
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	ND	41,000 ^(4,5)
Di-n-butylphthalate	ND	2.680	ND	ND	ND	ND	ND	ND	2,300 ^(2,3)
Di-n-octylphthalate	ND	ND	ND	ND	ND	ND	ND	4.880	4,100 ⁽⁵⁾
Fluoranthene	ND	9.840	ND	ND	ND	298.000	0.460	ND	82,000 ^(4,5)
Fluorene	ND	ND	ND	ND	ND	15.600	ND	ND	82,000(4.5)
Indeno[1,2,3-cd]pyrene	ND	ND	ND	ND	ND	61.100	ND	2.260	8 ⁽⁴⁾
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	6,100 ⁽⁵⁾⁽⁶⁾
3&4-Methylphenol	ND	ND	ND	ND	ND	ND.	ND	ND	NE
Naphthalene	ND	ND	ND	ND	ND	11.100	ND	ND	8,200 ⁽⁵⁾
Phenanthrene	ND	10.100	ND	ND	0.921	284.000	0.340	3.040	6,100 ⁽⁵⁾⁽⁶⁾
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	120,000 ⁽⁵⁾
Pyrene	ND	8.770	ND	ND	ND	370.000	0.460	5.440	61,000 ^(4,5)
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	920 ⁽³⁾

Table 2. Summary of SVOC Analytical Results for Soil Samples (Continued)

Sample I.D.	B-204	B-205	B-206	B-207	B-208	B-209	B-210	B-211	Soil
Sample Location	B-204	B-205	B-206	B-207	B-208	B-209	B-210	B-211	Remediation
Soil Type	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Objectives ⁽¹⁾
Analyte						Un et lite			
Acenaphthene	ND	12.800	1.020	0.510	6.180	1.080	ND	ND	120,000(4,5)
Acenaphthylene	ND	ND	ND	0.500	4.460	0.770	ND	ND	4,100(5)(6)
Anthracene	ND	36.200	ND	2.000	17.100	3.290	ND	0.570	610,000 ^(4,5)
Benzo[a]anthracene	ND	48.000	ND	4.310	39.800	5.590	ND	1.900	8(4)
Benzo[b]fluoranthene	ND	29.500	ND	4.100	32.100	5.320	ND	1,770	8 ⁽⁴⁾
Benzo[k]fluoranthene	ND	32.300	ND	3.070	22.200	4.100	ND	1.160	78 ⁽⁴⁾
Benzo[g,h,i]perylene	ND	6.880	ND	2.250	9.600	2.470	ND	0.910	6,100 ⁽⁵⁾⁽⁶⁾
Benzo[a]pyrene	ND	30.800	ND	4.300	38.400	6.190	ND	1.590	0.8 ⁽⁴⁾
bis(2-Ethylhexyl)phthalate	ND	ND	ND	ND	ND	ND	ND	ND	410 ⁽⁴⁾
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	930 ^(2,3)
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	. NE
4-Chlorophenyl-phenylether	ND	ND	ND	ND	ND	ND	ND	ND	NE_
Chrysene	ND	42.600	ND	4.320	32.900	5.040	ND	1.930	780 ⁽⁴⁾
Dibenzo[a,h]anthracene	ND	4.620	ND	0.860	4.610	0.860	ND	ND	0.8 ⁽⁴⁾
Dibenzofuran	ND	5.790	0.900	0.430	2.090	0.960	ND	ND	NE
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	ND	41,000 ^(4,5)
Di-n-butylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	2,300 ^(2,3)
Di-n-octylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	4,100 ⁽⁵⁾
Fluoranthene	0.380	127.000	0.640	8.570	78.100	12.400	ND	3.680	82,000 ^(4,5)
Fluorene	ND	10.600	1.460	0.840	10.700	1.350	ND	ND	82,000 ^(4,5)
Indeno[1,2,3-cd]pyrene	ND	7.800	ND	2.120	8.930	2,420	ND	0.830	8 ⁽⁴⁾
2-Methylnaphthalene	ND	ND	9.250	0.410	2.820	0.460	ND	ND	6,100 ⁽⁵⁾⁽⁶⁾
3&4-Methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	NE
Naphthalene	ND	2.120	ND	0.660	5.410	1.280	ND	ND	8,200 ⁽⁵⁾
Phenanthrene	ND	111.000	3.620	7.940	86.800	5.790	ND	2.690	6,100 ⁽⁵⁾⁽⁶⁾
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	120,000(5)
Pyrene	0.360	99.300	1.020	9.240	98.200	13.100	ND	3.640	61,000 ^(4,5)
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	920 ⁽³⁾

Table 2. Summary of SVOC Analytical Results for Soil Samples (Continued)

Sample I.D.	B-214	B-215	B-216	TP-301	TP-303	TP-305	TP-308	TP-309	Soil	
Sample Location	B-214	B-215	B-216	TP-301	TP-303	TP-305	TP-308	TP-309	Remediation	
Soil Type	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Objectives (1)	
Analyte		· · · · · · · · · · · · · · · · · · ·								
Acenaphthene	ND	ND	0.850	ND	ND	ND	ND	ND	120,000 ^(4,5)	
Acenaphthylene	ND	ND	ND	ND	МD	ND	ND	ND	4,100(5)(6)	
Anthracene	1.030	ND	1.060	ND	ND	ND	ND	ND	610,000 ^(4,5)	
Benzo[a]anthracene	2.820	ND	1.740	ND	ND	ND	ND	ND	8 ⁽⁴⁾	
Benzo[b]fluoranthene	2.760	ND	1.090	ND	ND	ND	ND	ND	8 ⁽⁴⁾	
Benzo[k]fluoranthene	2.090	ND	1.340	ND	ND	ND	ND	ND	78 ⁽⁴⁾	
Benzo[g,h,i]perylene	1.070	ND	0.640	ND	ND	ND	ND	ND	6,100 ⁽⁵⁾⁽⁶⁾	
Benzo[a]pyrene	2.830	ND	1.380	ND	ND	ND	ND	ND	0.8 ⁽⁴⁾	
bis(2-Ethylhexyl)phthalate	ND	ND	ND	ND	ND	ND	0.850	ND	410 ⁽⁴⁾	
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	930 ^(2,3)	
4-Chloro-3-methylphenol	ND	ND	ND	ND	3.500	ND	ИD	ND	NE	
4-Chlorophenyl-phenylether	ND	ND	ND	ND	ND	ND	ND ·	ND	NE	
Chrysene	2.890	ND	1.770	ND	ND	ND	ND	ND	780 ⁽⁴⁾	
Dibenzo[a,h]anthracene	ND	ND	ND	ND	ND	ND	ND	ND	0.8 ⁽⁴⁾	
Dibenzofuran	ND	ND	0.900	ND	ND	ND	ND	ND	NE	
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	ND	41,000(4,5)	
Di-n-butylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	2,300 ^(2,3)	
Di-n-octylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	4,100 ⁽⁵⁾	
Fluoranthene	4.640	0.410	3.320	1.130	ND	ND	ND	ND	82,000 ^(4,5)	
Fluorene	ND	ND	0.900	ND	ND	ND	ND	ND	82,000 ^(4,5)	
Indeno[1,2,3-cd]pyrene	ND	ND	0.540	ND	ND	ND	ND	ND	8 ⁽⁴⁾	
2-Methylnaphthalene	ND	ND	1.430	ND	ND	ND	ND	ND	6,100 ⁽⁵⁾⁽⁶⁾	
3&4-Methylphenol	ND	ND	ND	ND	ND .	ND	ND	ND	NE	
Naphthalene	ND	ND	1.010	ND	ND	. ND	ND	ND	8,200 ⁽⁵⁾	
Phenanthrene	3.330	0.370	5.020	ND	ND	0.452	ND	ND	6,100(5)(6)	
Phenol	ND	ND	ND	ND	ND	ND	ND	ND ·	120,000 ⁽⁵⁾	
Pyrene	4.470	0.360	2.690	ND	1.160	ND	ND	ND	61,000 ^(4,5)	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	920 ⁽³⁾	

Table 2. Summary of SVOC Analytical Results for Soil Samples (Continued)

Sample I.D.	TP-311	B-314	B-316	B-318	B-319	B-320	B-321	B-321	Soil
Sample Location	TP-311	B-314	B-316	B-318	B-319	B-320	B-321	B-321	Remediation
Soil Type	Fill	Fill	Fill	Fill	Fill	Fill_	Fill	Fill	Objectives ⁽¹⁾
Analyte	YYR TH								•
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	120,000(4,5)
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	4,100 ⁽⁵⁾⁽⁶⁾
Anthracene	ND	ND	1.230	ND	ND	ND	ND	ND	610,000 ^(4,5)
Benzo[a]anthracene	ND	ND	0.994	ND	ND	ND	ND	ND	8(4)
Benzo[b]fluoranthene	ND	ND	1.400	ND	ND	ND_	1.250	ND	8 ⁽⁴⁾
Benzo[k]fluoranthene	ND	ND	1.600	ND	ND	ND	ND	ND	78 ⁽⁴⁾
Benzo[g,h,i]perylene	ND	ND	ND	ND	ND	ND	ND	ND	6,100 ⁽⁵⁾⁽⁶⁾
Benzo[a]pyrene	ND	ND	ND	ND	ND	ND	ND	ND	0.8 ⁽⁴⁾
bis(2-Ethylhexyl)phthalate	1.110	ND	2.040	1.610	31.000	ND	5.080	ND	410 ⁽⁴⁾
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	930 ^(2,3)
4-Chloro-3-methylphenol	ND	0.536	1.280	ND	ND	ND	ND	0.608	NE
4-Chlorophenyl-phenylether	ND	ND	ND	ND	ND	ND	ND	ND	NE
Chrysene	ND	ND	1.150	ND	ND	ND_	ND	ND	780 ⁽⁴⁾
Dibenzo[a,h]anthracene	ND	ND	ND	ND	ND	ND	ND	ND	0.8 ⁽⁴⁾
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	NE
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	NĎ	41,000 ^(4,5)
Di-n-butylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	2,300 ^(2,3)
Di-n-octylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	$4,100^{(5)}$
Fluoranthene	ND	ND	5.560	1.600	3.530	ND	1.680	ND	82,000(4,5)
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	82,000 ^(4,5)
Indeno[1,2,3-cd]pyrene	ND	ND	ND	ND	ND	ND	ND	ND	8 ⁽⁴⁾
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	6,100(5)(6)
3&4-Methylphenol	ND	<u>N</u> D	ND	ND	ND	ND	ND	ND	NE
Naphthalene	ND	ND	ND	ND	ND	ND	1.580	ND	8,200 ⁽⁵⁾
Phenanthrene	ND	3.880	6.480	ND	2.140	ND	1.090	ND	6,100 ⁽⁵⁾⁽⁶⁾
Phenol	ИD	ND	ND	ND	ND	ND	ND	ND	120,000 ⁽⁵⁾
Pyrene	ND	ND	3.350	1.090	2.270	ND	1.650	ND	61,000(4,5)
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	920 ⁽³⁾

Table 2. Summary of SVOC Analytical Results for Soil Samples (Continued)

Sample I.D.	B-323	B-329	B-332	B-336	B-337	B-340	B-1	B-2	Soil
Sample Location	B-323	B-329	B-332	B-336	B-337	B-340	B-1	B-2	Remediation
Soil Type	Fill	Fill	Fill	Fill	Fill	Fill	Clay	Fill	
Analyte		er (Herri Gerjakur V.	ig keli			tidişedi) di.		A. Wil	Objectives ⁽¹⁾
Acenaphthene	ND	ND	1.940	ND	ND	ND	ND	ND	120,000(4,5)
Acenaphthylene	ND	ND	0.364	ND	ND	ND	ND	ND	4,100 ⁽⁵⁾⁽⁶⁾
Anthracene	ND	ND	3.520	ND	ND	ND	ND	ND	610,000(4,5)
Benzo[a]anthracene	2.690	ND	8.730	ND	1.110	ND	ND	ND	8(4)
Benzo[b]fluoranthene	2.930	ND	8.270	ND	ND	ND	ND	ND	8(4)
Benzo[k]fluoranthene	1.740	ND	8.080	ND	ND	ND	ND	ND	78 ⁽⁴⁾
Benzo[g,h,i]perylene	ND	ND	5.330	ND	ND	ND	ND	ND	6,100 ⁽⁵⁾⁽⁶⁾
Benzo[a]pyrene	2.490	ND	8.860	ND	ND	ND	ND	ND	0.8 ⁽⁴⁾
bis(2-Ethylhexyl)phthalate	57.000	ND	. ND	ND	9.090	6.300	NA	NA	410 ⁽⁴⁾
Butylbenzylphthalate	4.790	ND	ND	_ND	ND	ND	NA	NA	930 ^(2,3)
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	ND	NA	· NA	NE
4-Chlorophenyl-phenylether	ND	ND	ND	ND	ND	ND	NA	NA	NE
Chrysene	2.920	2.390	9.110	ND	1.320	ND	ND	ND	780 ⁽⁴⁾
Dibenzo[a,h]anthracene	ND	ND	2.000	ND	ND	ND	ND	ND	0.8 ⁽⁴⁾
Dibenzofuran	ND	ND	1.360	ND	ND	ND	N <u>A</u>	NA	NE
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	NA	NA	41,000(4,5)
Di-n-butylphthalate	ND	ND	ND	ND	ND	ND	NA	NA	2,300 ^(2,3)
Di-n-octylphthalate	2.020	ND	ND	ND	ND	ND	NA	NA	4,100 ⁽⁵⁾
FIuoranthene	7.470	3.110	19.100	1.700	2.880	ND	ND	ND	82,000 ^(4,5)
Fluorene	ND	ND	2.220	ND	1.020	ND	ND	ND	82,000(4,5)
Indeno[1,2,3-cd]pyrene	ND	ND	4.870	ND	ND	ND	ND	ND	8 ⁽⁴⁾
2-Methylnaphthalene	2.890	ND	8.390	1.840	2.860	ND_	NA	NA	6,100 ⁽⁵⁾⁽⁶⁾
3&4-Methylphenol	4.140	ND	ND	ND	ND	ND	NA	NA	NE
Naphthalene	2,200	ND	4.270	1.990	ND	ND	ND	ND	8,200 ⁽⁵⁾
Phenanthrene	6.830	4.200	16.400	1.440	2.870	ND	ND	ND	6,100 ⁽⁵⁾⁽⁶⁾
Phenol	3.170	ND	ND	ND	ND	ND	NA	NA	120,000 ⁽⁵⁾
Pyrene	4,720	3.820	16.300	1.530	2.140	ND	ND	ND	61,000 ^(4,5)
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	NA	NA	920 ⁽³⁾

Table 2. Summary of SVOC Analytical Results for Soil Samples (Continued)

Sample I.D.	B-3	B-4	B-5	B-6	Soil-1	Soil-1	Soil-2	Soil-3	Soil	
Sample Location	B-3	B-4	B-5	B-6	0-0.5'	2'	0-0.5'	0-0.5	Remediation	
Soil Type	Fill	Clay	Clay	Clay	Fill	Fill	Fill	Fill	Objectives ⁽¹⁾	
Analyte	第四次 建筑 的复数 1000 1000 1000 1000 1000 1000 1000 10								I	
Acenaphthene	ND	ND	ND ·	ND	0.451	NA	ND	ND	120,000(4,5)	
Acenaphthylene	ND	ND	ND	ND	NA.	NA	NA	NA	4,100 ⁽⁵⁾⁽⁶⁾	
Anthracene	ND	ND	ND	ND	0.772	NA	ND	ND	610,000(4,5)	
Benzo[a]anthracene	0.820	ND	ND	0.547	1.070	NA	ND	ND	8 ⁽⁴⁾	
Benzo[b]fluoranthene	0.273	ND	ND	ND	1.090	NA	ND	ND	8 ⁽⁴⁾	
Benzo[k]fluoranthene	0.274	ND	ND	ND	1.090	NA	ND	ND	78 ⁽⁴⁾	
Benzo[g,h,i]perylene	ND	ND	ND	ND	0.588	NA	ND	ND	6,100 ⁽⁵⁾⁽⁶⁾	
Benzo[a]pyrene	ND	ND	ND	ND	2.770	0.666	ND	ND	0.8 ⁽⁴⁾	
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	1.540	NA	1.150	NĐ	410 ⁽⁴⁾	
Butylbenzylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	930 ^(2,3)	
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NE NE	
4-Chlorophenyl-phenylether	NA	NA	NA	NA	NA	NA	NA	NA	NE	
Chrysene	2.010	ND	ND	1.640	3.110	NA	ND	ND	780 ⁽⁴⁾	
Dibenzo[a,h]anthracene	ND	ND	ND	ND	NA	NA	NA	NA	$0.8^{(4)}$	
Dibenzofuran	NA	NA	NA	NA	1.990	NA	ND	ND	NE	
2,4-Dimethylphenol	NA	NA	NA	NA.	0.613	NA	ND	ND	41,000(4,5)	
Di-n-butylphthalate	NA	NΑ	NA	NA	ND	NA	ND	0.408	2,300(2,3)	
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	4,100 ⁽⁵⁾	
Fluoranthene	3.560	ND	ND	2.880	2.440	NA	ND	ND	82,000(4,5)	
Fluorene	0.182	ND	ND	ND	0.330	NA	ND	ND	82,000 ^(4,5)	
Indeno[1,2,3-cd]pyrene	ND	ND	ND	ND	0.541	NA	ND	ND	8 ⁽⁴⁾	
2-Methylnaphthalene	NA	NA	NA	NA	6.210	NA	ND	ND	6,100(5)(6)	
3&4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NE	
Naphthalene .	ND	ND	ND	ND	4.430	NA	ND	ND	8,200 ⁽⁵⁾	
Phenanthrene	2.460	ND	ND	2.640	ND	NA	ND	ND	6,100 ⁽⁵⁾⁽⁶⁾	
Phenol	NA	NA	NA	NA	NA	NA	NA	NA	120,000 ⁽⁵⁾	
Pyrene	3.280	ND	ND	2.550	3.240	NA	ND	ND	61,000 ^(4,5)	
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	920 ⁽³⁾	

Table 2. Summary of SVOC Analytical Results for Soil Samples (Continued)

Sample I.D.	Soil-4	S-1	S-2	S-3	S-4	S-5	Yarayteak	Michije.	Soil
Sample Location	0-0.5'	S-1	S-2	S-3	S-4	S-5			Remediation
Soil Type	Fill	Fill	Fill	Fill	Fill	Fill	MATCHET.		
Analyte	a(GQ	到地理性		uavit:		oporeción			Objectives ⁽¹⁾
Acenaphthene	ND	ND	ND	ND	ND	0.360	Krajej	AND NOT	120,000(4,5)
Acenaphthylene	NA	NA	NA	NA	NA	NA	vid Akto		4,100(5)(6)
Anthracene	ND	ND	ND	ND	ND	0.690	S Para	and in Arres	610,000 ^(4,5)
Benzo[a]anthracene	ND	0.650	ND	0.370	ND	1.400		dayagara 1	8 ⁽⁴⁾
Benzo[b]fluoranthene	ND	ND	ND	ND	ND	1.300			8 ⁽⁴⁾
Benzo[k]fluoranthene	ND	0.770	ND	ND	ND	1.000	o Organia	warn tiday	78 ⁽⁴⁾
Benzo[g,h,i]perylene	ND	0.480	ND	ND	ND	0.690	- 10 to 15 di		6,100 ⁽⁵⁾⁽⁶⁾
Benzo[a]pyrene	ND	0.800	ND	ND	ND	1.400	s pen	Para	0.8 ⁽⁴⁾
bis(2-Ethylhexyl)phthalate	ND	ND	ND	ND	5.000	ND	Constitute	**** ********************************	410 ⁽⁴⁾
Butylbenzylphthalate	NA	NA	NA	NA	NA	NA	F 6 (146)		930 ^(2,3)
4-Chloro-3-methylphenol	NA	ND	ND	ND	4.000	ND	5 PER	一般ない。	NE
4-Chlorophenyl-phenylether	NA	NA	NA	NA_	NA	NA	thursday to to	125,234	NE
Chrysene	ND	0.850	ND	0.480	ND	1.500		and the	780 ⁽⁴⁾
Dibenzo[a,h]anthracene	NA	ND	ND	ND	ND	0.610	字型 指数		0.8 ⁽⁴⁾
Dibenzofuran	ND	NA	NA	NA	NA	NA			NE
2,4-Dimethylphenol	ND	NA	NA	NA	NA	NA	a giljika	VENTO ENT	41,000 ^(4,5)
Di-n-butylphthalate	ND	NA	NA	NA	NA	NA			$2,300^{(2,3)}$
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	Ely Mary	Y.W.P.L.	4,100 ⁽⁵⁾
Fluoranthene	ND	1.300	0.350	0.730	ND	2.800			82,000 ^(4,5)
Fluorene	ND	ND	ND	ND	ND	0.370	A College Program		82,000 ^(4,5)
Indeno[1,2,3-ed]pyrene	ND	0.790	ND	0.420	ND	1.200			8 ⁽⁴⁾
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	37 MAYS	\$1.178.14	6,100 ⁽⁵⁾⁽⁶⁾
3&4-Methylphenol	NA	ND	ND	ND	ND	ND			NE
Naphthalene	ND	ND	ND	ND	ND	0.450	$\mathbb{E}_{\mu^*}[[\mathcal{L}_{\eta\eta}^{\mu}, -1]_{-2}]$	J09.840	8,200 ⁽⁵⁾
Phenanthrene	ND	1.000	ND	0.620	ND	2.600	a extendit a i		6,100 ⁽⁵⁾⁽⁶⁾
Phenol	NA	ND	ND	ND	ND	ND			120,000 ⁽⁵⁾
Ругепе	ND	1.400	0.370	0.720	ND	1.900		Market.	61,000 ^(4,5)
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA		HAP NAME	920 ⁽³⁾

Table 3. Summary of PCB Analytical Summary of Soil Samples

	Sam	ple Method	Aroclor	Aroclor	Aroclor	Total PCBs
		SRO	1242	1254	1260	1
ID	Location	Soil Type				
S-101	TP-102	Fill	ND	ND	ND	ND
S-102	TP-102	Clay	ND	ND	ND	ND
S-103	TP-104	Fill	ND	ND	ND	ND
S-104	TP-104	Clay	ND	ND	ND	ND
S-105	TP-106	Fill	2.28	ND	8.97	11.25
S-106	TP-106	Clay	ND	ND	ND	ND_
S-107	TP-108	Fill	ND	ND	ND	ND
S-108	TP-108	Clay	ND	ND	ND	ND_
S-109	TP-109	Fill	3.11	ND	ND	3.11
S-110	TP-109	Clay	ND	ND	ND	ND
S-111	TP-114	Fill	ND	ND	ND	ND
S-112	TP-114	Clay	ND	ND	ND	ND_
S-113	TP-116	Fill	ND	ND	0.318	0.318
S-114	TP-117	Clay	ND	ND	ND	ND ·
S-116	TP-119	Fill	ND	ND	ND	ND_
S-117	TP-119	Clay	ND	_ND	ND	ND_
S-118	TP-120	Fill	ND	ND	ND	ND
S-119	TP-120	Clay	ND	ND	ND	ND
S-120	TP-121	Fill	ND	ND	ND	ND_
S-121	TP-123	Fill	ND	ND	ND	ND_
S-122	TP-123	Clay	ND	ND	ND	ND
S-123	TP-124	Fill	ND	ND	ND	ND
S-124	TP-125	Fill	ND	ND	ND	ND
S-125	TP-125	Clay	ND	ND	ND	ND_
S-126	TP-126	Clay	ND	ND	ND	ND
S-127	TP-127	Fill	ND	ND	ND	ND
S-128	_ TP-127	Clay	ND	ND	ND	ND
S-129	TP-129	Fill	4.3	1.68	ND	5.98
S-130	TP-129	Clay	ND	ND	ND	ND
S-131	TP-130	Clay	ND	ND	ND	ND_
S-132	TP-132	Fill	ND	ND	ND	ND
S-133	TP-133	Fill	0.307	1.98	ND	2.287
S-134	TP-133	Clay	ND .	ND	ND	ND
S-135	TP-134	Fill	ND	ND	ND	ND
S-136	TP-134	Clay	ND	ND	ND	ND
B-201	B-201	Fill	ND	ND	ND	ND
B-202	B-202	Fill	ND	ND	1.65	1.65
B-204	B-204	Fill	ND	ND	ND	ND
B-205	B-205	Fill	ND	ND	ND	ND
B-206	B-206	Fill	ND	ND	ND	ND
B-207	B-207	Fill	ND	ND	ND	ND
B-208	B-208	Fill	ND	ND	ND	ND
B-209	B-209	Fill	ND	ND	ND	ND
B-210	B-210	Fill	ND	ND	ND	ND

Table 3. Summary of PCB Analytical Summary of Soil Samples (Continued)

	Sam	ple Method	Aroclor	Aroclor	Aroclor	Total PCBs
		SRO	1242	1254	1260	1
ID	Location	Soil Type	MC-Labeled B			
B-211	B-211	Fill	ND	ND	ND	ND
B-212	B-212	Fill	ND	ND	ND	ND
B-214	B-214	Fill	ND	ND	ND	ND
TP-301	TP-301	Fill	3.12	ND	2.02	5.14
TP-302	TP-302	Fill	ND	76.9	ND	76.9
TP-303	TP-303	Fill	0.998	ND	ND	0.998
TP-303S	TP-303	Fill	0.568	ND	ND	0.568
TP-306S	TP-306	Fill	0.786	ND	ND	0.786
TP-308	TP-308	Fill	0.896	0.608	ND	1.504
TP-309	TP-309	Fill	4.99	ND	ND	4.99
TP-310	TP-310	Fill	198	ND	16.8	214.8
TP-311	TP-311	Fill	2.19	0.527	ND	2.717
TP-312S	TP-312	Fill	18.3	23	ND	41.3
TP-313	TP-313	Fill	16	ND	1.5	17.5
B-314	B-314	Fill	ND	ND	ND	ND
B-315	B-315	Fill	ND	ND	ND	ND
B-316	B-316	Fill	ND	ND	ND	ND
B-317	B-317	Fill	0.613	2.39	ND	3.003
B-318	B-318	Fill	0.878	ND	ND	0.878
B-319	B-319	Fill	26.9	1.28	ND	28.18
B-320	B-320	Fill	ND	ND	ND	ND
B-321	B-321(0.5')	Fill	3.79	1.17	ND	4.96
B-321	B-321(2.0')	Fill	ND	ND	ND	ND
B-322	B-322	Fill	19.4	ND	ND	19.4
B-323	B-323	Fill	21.2	1.96	ND	23.16
B-324	B-324	Fill	0.594	ND	ND	0.594
B-325	B-325	Fill	ND	ND	ND	ND
B-327	B-327	Fill	ND	ND	ND	ND
B-328	B-328	Fill	ND	ND	ND	ND
B-329	B-329	Fill	ND	ND	ND	ND
B-330	B-330	Fill	0.49	ND	0.201	0.691
B-332	B-332	Fill	ND	ND	ND	ND
B-335	B-335	Fill	ND	ND	ND	ND
B-336	B-336	Fill	ND	ND	ND	ND
B-337	B-337	Fill	1.01	ND	ND	1.01
B-338	B-338	Fill	2.39	ND	0.805	3.195
B-339	B-339	Fill	1.96	ND	0.991	2.951
B-340	B-340	Fill	0.935	ND	0.691	1.626
B-341	B-341	Fill	2.3	ND	0.405	2.705
S-1	S-1	Fill	ND	ND	ND	ND
S-2	S-2	Fill	ND	ND	ND	ND .
S-3	S-3	Fill	ND	ND	ND	ND
S-4	S-4	Fill	ND	ND	ND	ND
S-5	S-5	Fill	ND	ND	ND	ND

Table 4. Summary of Total RCRA Metals Analytical Results for Soil Samples

	······································	Analyte	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	рH
		SRO	7.2 ⁽⁹⁾	14,000	200	330,000(10)	400	61	1,000	1,000	hu
Sample ID	Sample	Soil							<u> </u>		•
-	Location	Type		The production							
S-101	TP-102	Fill	11.00	33.60	2.40	9.70	116.00	0.09	ND	ND	NA
S-103	TP-104	Fill	17.40	342.00	7.20	49.80	152.00	0.15	ND	0.20	NA
S-104	TP-104	Clay	9.50	35.60	1.50	17.60	16.50	ND	ND	ND	NA
S-105	TP-106	Fill	21.50	72.10	17.40	1,120.00	211.00	0.12	ND	0.30	NA
S-107	TP-108	Fill	120.00	112.00	6.40	23.20	151.00	ND	ND	. 0.40	NA
S-109	TP-109	Fill	17.40	72.70	5.80	88.70	220.00	0.16	ND	ND	NΛ
S-111	TP-114	Fill_	5.90	63.90	2.30	6.80	249.00	0.16	ND	ND	NA
S-112	TP-114	Clay	9.60	39.00	1.50	17.50	19.00	ND	ND	ND	NA
S-116	TP-119	Fill	2.40	64.90	0.80	33.90	49.80	ND	ND	ND	NA
S-117	TP-119	Clay	7.40	31.10	1.00	13.70	14.60	ND	ND	ND	NA
S-118	TP-120	Fill	9.50	58.90	3.40	21.20	37.90	ND	ND	ND	NΛ
S-119	TP-120	Clay	6.20	56.00	1.60	16.30	19.90	ND	ND	ND	NA
S-121	TP-123	Fill	11.00	130.00	21.90	1,980.00	174.00	ND	ND	0.20	NA
S-122	TP-123	Clay	10.80	90.80	1.90	20.60	35.60	ND	ND	ND	NA
S-124	TP-125	Fill	28.60	48.00	17.90	73.60	41.20	ND	ND	1.40	NA
S-127	TP-127	Fill	5.50	160.00	14.80	418.00	6,930.00	5.54	ND	3.20	NA
S-128	TP-127	Clay	10.50	32.20	1.80	19.40	19.00	ND	ND	ND	NA
S-129	TP-129	Fill	6.60	133.00	18.50	1,420.00	578.00	0.13	ND	1.40	NA
S-133	TP-133	Fill	2.00	46.10	3.50	11.30	115.00	ND	ND	ND	NA
S-134	TP-133	Clay	10.30	29.10	1.90	17.40	19.50	ND	ND	ND	NA
S-135	TP-134	Fill	97.80	72.30	8.10	63.10	95.60	0.07	ND	ND	NA
B-201	B-201	Fill	10.90	48.00	ND	22.10	45.80	0.12	0.70	ND	8.56
B-202	B-202	Fill_	7.60	69.40	ND	11.40	33.60	0.11	ND	ND	8.86
B-203	B-203	Fill	21.30	91.40	ND	69.40	117.00	0.13	2.20	ND	8.71
B-204	B-204	Fill	22.40	66.60	0.70	21.20	180.00	0.11	0.50	0.20	8.79
B-205	B-205	Fill	3.20	55.20	0.30	8.80	106.00	0.11	ND	ND	10.37
B-206	B-206	Fill	9.10	52.50	ND	16.60	58.90	0.15	ND	ND	8.81
B-207	B-207	Fill_	10.30	66.60	ND	28.50	341.00	0.39	0.70	ND	8.85
B-208	B-208	Fill	7.00	51.40	ND	20.00	25.50	0.08	0.50	ND	8.97
B-209	B-209	Fill	12.40	70.70	1.50	. 16.50	186.00	0.13	0.60	0.60	9.58
B-210	B-210	Fill	13.90	55.10	ND	14.80	82.70	0.07	4.20	ND	8.44
B-211	B-211	Fill	18.60	102.00	0.40	14.20	131.00	0.09	0.40	ND	7.43
B-214	B-214	Fill	7.10	65.90	0.70	25.40	173.00	0.13	ND	ND	8.02
B-215	B-215	Fill	12.40	161.00	ND	28.90	80.60	0.24	0.30	ND	7.34
B-216	B-216	Fill	0.30	25.40	0.30	0.80	35.80	0.09	ND	ND	7.82
TP-301	TP-301	Fill	25.20	348.00	ND	2,160.00	2,990.00	0.44	ND	2.60	8.46
TP-303	TP-303	Fill	38.90	78.60	ND	40.20	95.90	ND	0.80	0.20	7.62
TP-303S	TP-303	Fill	25.00	27.50	ND	807.00	1,280.00	0.05	ND	10.50	8.67
TP-306S	TP-306	Fill	7.90	38.20	ND	167.00	109.00	0.07	ND	0.02	8.81
TP-308	TP-308	Fill	17.00	98.10	ND	1,200.00	420.00	0.19	ND	2.40	8.94
TP-309	TP-309	Fill	10.00	197.00	0.20	790.00	517.00	0.31	ND	25.00	10.16

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Table 4. Summary of Total RCRA Metals Analytical Results for Soil Samples (Continued)

		Analyte	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	<u> </u>
		SRO	7.2 ⁽⁹⁾	14,000	200	330,000 ⁽¹⁰⁾		61	1,000	1,000	pН
<u> </u>	Camanla		7.2	1 1,000		330,000			1,000	1,000	<u> </u>
Sample ID	Sample Location	Soil Type									
TP-311	TP-311	Fill	32.80	77.40	4.40	78.40	365.00	0.99	ND	1.80	8.60
TP-313	TP-313	Fill	19.20	57.40	ND	21.90	92.40	0.29	ND	0.50	10.64
B-314	B-314	Fill	24.70	62.20	ND	282.00	220.00	0.21	ND	ND	9.58
B-315	B-315	Fill	6.60	41.10	ND	14.80	45.50	ND	ND	ND	7.94
B-316	B-316	Fill	72.50	108.00	ND	24.20	75.10	0.12	4.80	ND	8.80
B-317	B-317	Fill	13.20	56.70	ND	30.70	206.00	0.10	0.40	ND	8.21
B-318	B-318	Fill	4.20	481.00	5.20	130.00	332.00	ND	ND	1.10	10.61
B-319	B-319	Fill	37.70	448.00	5.20	316.00	1,110.00	0.19	7.10	2.90	8.25
B-320	B-320	Fill	41.60	41.50	ND	28.50	53.40	ND	6.00	ND	7.69
B-321(0.5')	B-321	Fill	14.10	217.00	45.10	438.00	3,320.00	0.47	ND	2.10	8.29
B-321(2.5')	B-321	Fill	17.30	121.00	0.10	106.00	52.70	0.07	1.00	ND	7.95
B-322	B-322	Fill	9.70	358.00	52.80	280.00	4,200.00	0.92	ND	2.80	8.80
B-323	B-323	Fill	8.00	239.00	14.80	869.00	1,340.00	0.50	ND	6.80	9.09
B-324	B-324	Fill	1.60	16.20	0.50	12.20	136.00	ND	ND	ND	10.84
B-325	B-325	Fill	2.90	36.40	0.20	190.00	3,770.00	ND	ND	0.30	10.34
B-327	B-327	Fill	10.80	53.10	2.90	39.80	108.00	0.18	0.60	0.30	8.73
B-328	B-328	Fill	5.50	92.10	7.70	105.00	644.00	0.45	ND	0.70	9.96
B-329	B-329	Fill	1.00	10.70	0.20	6.50	23.20	ND	ND	ND	9.28
B-330	B-330	Fill	1.40	16.50	0.30	14.30	92.10	ND	ND	ND	9.43
B-332	B-332	Fill	10.60	49.50	ND	6.70	315.00	ND	3.60	ND	8.21
B-336	B-336	Fill	2.80	45.40	0.30	17.20	51.40	0.06	ND	ND	9.05
B-337	B-337	Fill	7.10	68.00	2.00	13,600.00	401.00	0.08	ND	0.50	8.69
B-338	B-338	Fill	52.30	266.00	34.20	631.00	466.00	0.16	5.20	0.80	9.48
B-339	B-339	Fill	10.60	199.00	10.00	1,040.00	1,000.00	0.61	ND	1.70	9.85
B-340	B-340	Fill	1.30	20.20	ND	9.80	18.60	ND	ND	ND	10.44
Soil-1	0-0.5'	Fill	18.40	148.00	7.60	89.50	2,090.00	1.05	NA	1.20	NA
Soil-1	- 2'	Fill	NA	NA	NA	NA	100.00	NA	NA	NA	NA
Soil-2	0-0.5'	Fill	7.90	42.40	1.80	18.80	25.00	0.07	NA	ND	NA
Soil-3	0-0.51	Fill	14.80	63.50	3.60	18.80	102.00	0.20	NA	ND	NA
Soil-4	0-0.5'	Fill	1.90	10.30	0.70	132.00	25.10	ND	NA	ND	NA
S-1	S-1	Fill	5.84	66.80	8.80	84:00	675.00	0.49	2.30	0.67	NA
S-2	S-2	Fill	1.69	19.80	0.53	9.91	174.00	0.22	2.22	0.22	NA
S-3	S-3	Fill	9.55	46.10	3.16	3,490.00	164.00	0.41	2.99	0.93	NA
S-4	S-4	Fill	6.02	49.50	28.90	580.00	432.00	0.21	2.13	1.43	NA
S-5	S-5	Fill	11.10	62.30	2.83	49.90	95.80	0.26	2.60	0.78	NA

Table 5. Summary of Analytical Results for Surface Water Samples

Sample ID	W-104	W1	W2
Description	Pond Water	Surface water from embankment run- off	Pond Water
Date Taken	9/1/00	11/10/98	11/10/98
Analyte			·
Cyanide	ND	*	*
Sulfide	ND	*	*
Flash Point	ND	*	*
Specific Gravity	0.97	*	*
рН @ 25°C	7.51	*	*
Total Solids	8,500	*	*
TCLP Metals	ur e gjevelka		
Arsenic	ND	* .	*
Barium	ND	*	*
Cadmium	ND	*	*
Chromium	ND	*	*
Lead	0.003	*	*
Mercury	ND	*	*
Selenium	ND	*	*
Silver	ND	*	*
Total Metals		irulton Egip	
Arsenic	0.062	ND	ND
Barium	0.512	0.029	0.133
Cadmium	0.043	ND	0.009
Chromium	4.12	0.020	0.182
Copper	2.62	0.062	0.536
Iron	297	4.9	33.5
Lead	1.27	ND	0.449
Mercury	ND	ND	ND
Nickel	1.39	0.040	0.196
Selenium	ND	ND	ND
Silver	ND	ND	ND
Zinc	16.0	2.10	3.08

Table 5. Summary of Analytical Results for Surface Water Samples (Continued)

. Sample ID	W-104	W1	W2
Description	Pond Water	Surface water from embankment run-	Pond Water
Date Taken	9/1/00	11/10/98	11/10/98
TCLP VOCs			
Benzene	ND	*	*
2-Butanone	ND	*	*
Carbon tetrachloride	ND	*	*
Chlorobenzene	ND	*	*
Chloroform	ND	ND	ND
1,2-Dichloroethane	ND	*	*
1,1-Dichloroethene	ND	*	*
Tetrachloroethene	ND	*	*
Trichloroethene	ND	ND	ND
Vinyl Chloride	ND	*	*
SVOCs			
Benzo(k)flouranthene	*	ND	ND
Benzo(a)pyrene	*	ND	ND
Dibenze(a,h)anthracene	*	ND	ND
Indeno(1,2,3-c,d)pyrene	*	ND	ND
Benzo(g,h,i)pyrelene	*	ND	ND
TCLP BNAs		janja Basilinia	transpire v
1,4-Dichlorobenzene	ND	*	*
2,4-Dinitrotoluene	ND	*	*
Hexachlorobenzene	ND	*	*
Hexachlorobutadiene	ND	*	*
Hexachloroethane	ND	. *	*
2-Methyl phenol	ND	*	*
3&4-Methyl phenol	ND	*	*
Nitrobenzene	ND	*	*
Pentachlorophenol	ND	*	*
Pyridine	ND	*	*
2,4,5-Trichlorophenol	ND	*	*
2,4,6-Trichlorophenol	ND	*	*

Table 5. Summary of Analytical Results for Surface Water Samples (Continued)

Sample ID	W-104	W1	W2
Description	Pond Water	Surface water from embankment run- off	Pond Water
Date Taken	9/1/00	11/10/98	11/10/98
TCLP Pesticides	e ji natayarê		
Chlordane	ND	*	*
Endrin	ND	*	*
Heptachlor	ND	*	*
Heptachlor Epoxide	ND	*	*
Lindane	ND	*	*
Methoxychlor	ND	*	*
Toxaphene	ND	*	*
TCLP Herbicides			
2,4-D	ND	*	*
2,4,5-TP (Silvex)	ND	*	*

NOTES:

- 1. All results reported as mg/L
- 2. * = Not analyzed
- 3. ND= Not detected exceeding analytical detection limits

Table 6. Summary of Analytical Results for Sediment Samples

orania de la constanta de la 	Most Conservati	ve	POND SEI	DIMENT SAMPLES	E & E SAMPLE
	Tier 1 Industrial		SED-Comp	SED-2	S6 (Pond Seds)
	Remediation Go	al ·			
Volatile Organic Compounds					
Acetone	200,000	Inhalation	ра	1.6100	11.0
Benzene	1,5	Inhalation	na	0.0084	na
2-Butanone	120,000	Ingestion (CW)	na	0.2490	na
Carbon disulfide	9.0	Inhalation (CW)	na	0.0369	1.20
Chloromethane	440	Ingestion (CW)	na	0.3460	na
cis-1,2-Dichloroethene	1,200	Inhalation	na	0.2670	2.90
Ethyl benzene	58	Inhalation (CW)	na	0.0075	na
Tetrachloroethene	20	Inhalation	na	0.0427	na
Toluene	42	Inhalation (CW)	na	0.0373	1.60
Trichloroethene	8.9	Inhalation	ná	0.0122	< 0.5
Vinyl Chloride	0.06	Inhalation	na	0.0118	na
Xylenes (total)	410	Inhalation	na	0.0332	< 0.5
Base-Neutral/Acid Compoun					
Acenaphthene	120,000	Ingestion	< 3.300	na	< 0.330
Anthracene	610,000	Ingestion	< 3.300	na	< 0.330
Benzo[a]anthracene	8	Ingestion	< 3.300	na	< 0.330
Benzo[b]fluoranthene	8 .	Ingestion	< 3.300	na	< 0.330
Benzo[k]fluoranthene	78	Ingestion	< 3.300	na	< 0.330
Benzo[g,h,i]perylene	6,100	Ingestion (CW)	< 3.300	na	< 0.330
Benzo[a]pyrene	8.0	Ingestion	<:3.300.	na	< 0.330
bis(2-Ethylhexyl)phthalate	410	Ingestion	6.200	na	< 0.330
Chrysene	780	Ingestion	< 3.300	na	< 0.330
Dibenzofuran			< 3.300	na	па
2,4-Dimethy lphenol	41,000	Ingestion	< 3.300	na .	па
Di-n-butylphthalate	2,300	Inhalation	< 3.300	na	na
Fluoranthene	82,000	Ingestion	< 3.300	na	< 0.330
Fluorene	82,000	Ingestion	< 3.300	na	< 0.330
lndeno[1,2,3-cd]pyrene	8	Ingestion	< 3.300	na	< 0.330
2-Methylnaphthalene	6,100	Ingestion (CW)	< 3.300	na ·	< 0.330
Naphthalene	8,200	Ingestion	< 3.300	na	< 0.330
Phenanthrene	6,100	Ingestion (CW)	4.860	na	< 0.330
Pyrene	61,000	Ingestion	4.760	na	< 0.330
Total Metals	•				*.
Arsenic	3	Ingestion	7.5	na	10.3
Barium	14,000	Ingestion (CW)	70.6	na	37.7
Cadmium	200	Ingestion (CW)	8.3	na	3.31
Chromium	-330,000 ⁽¹⁾	Ingestion (CW)	1,550	па	2,490
l_cad	400	Ingestion	232	na	213
Mercury	61	Ingestion (CW)	< 0.05	na	< 0.286
Silver	1,000	Ingestion (CW)	< 0.1	na	0.429

NOTES:

= Exceeds most restrictive Tier 1 SRO

(CW) = Construction Worker Standard

na = Not Analyzed

-- = No Tier 1 Standard Avaliable

= Analytical detection limit exceeds Tier 1 SRO

< = Below analytical detection limits

(1) = SRO for trivalent chromium

All results reported as mg/kg

Metal Management, Inc.

CPI Environmental Services, Inc. Project No. E-05-73-01-199

Table 7. Soil Remediation Objectives and Background Levels

				Soil Remedia				Preliminary	Tier 2 SRO	-
į l				ıstrial/Comm				rienninary	HCI Z SKO	
	<u> </u>	l	Exposu	re Route Spe	cific Values	for Soil				
i i	•		Industrial-C	ommercial	Construct	ion Worker	Industrial-	Commercial	Construct	ion Worker
CAS No.	Parameter	Units	Ingestion	Inhalation	Ingestion	Inhalation	Ingestion	Inhalation	Ingestion	Inhalation
Organics		_								
67-64-1	Acetone	mg/kg	200,000	100,000	200,000	100,000				
71-43-2	Benzene	mg/kg	200	1.5	4,300	2.1				
78-93-3	2-Butanone	mg/kg	NL	NL 720	NL	NL 0.0	1,200,000	>	120,000	>
75-15-0	Carbon Disulfide	mg/kg	200,000	720 0.54	20,000	9.0 0.76				
67-66-3 74-87-3	Chloroform Chloromethane	mg/kg	940 NL	NL	2,000 NL	NL	440	>	9,600	>
75-34-3	1,1-Dichloroethane	mg/kg	200,000	1,700	200,000	130	4440		9,000	
156-59-2	cis-1,2-Dichloroethene	mg/kg mg/kg	20,000	1,200	20,000	1,200				
100-41-4	Ethyl benzene	mg/kg	200,000	400	20,000	58				
108-10-1	4-methyl-2-pentanone	mg/kg	200,000 NL	NL	20,000 NL	NL	160,000	>	16,000	>
127-18-4	Tetrachloroethene	mg/kg	110	20	2,400	28	100,000		10,000	
108-88-3	Toluene	mg/kg	410,000	650	410,000	42				
71-55-6	1,1,1-Trichloroethane	mg/kg		1,200		1,200				
79-01-6	Trichloroethene	mg/kg	520	8.9	1,200	12				
75-01-4	Vinyl Chloride	mg/kg	3	0.06	65	0.08				
1330-20-7	Xylenes (total)	mg/kg	1,000,000	410	410,000	410				
83-32-9	Acenaphthene	mg/kg	120,000		120,000					
	Acenaphthylene	mg/kg	NL	NL	NL	NL	41,000		4,100	
120-12-7	Anthracene	mg/kg	610,000		610,000			J		L
207-08-9	Benzo[k]fluoranthene	mg/kg	78		1,700					
56-55-3	Benzo(a)anthracene	mg/kg	8		170					
205-99-2	Benzo(b)fluoranthene	mg/kg	8		170					
50-32-8	Benzo(a)pyrene	mg/kg	0.8		17					
191-24-2	Benzo[g,h,i]perylene	mg/kg	NL	NL	NL	NL	61,000		6,100	T
117-81-7	Bis(2-Ethylhexyl)phthalate	mg/kg	410	31,000	4,100	31,000				
85-68-7	Butylbenzylphthalate	mg/kg	410,000	930	410,000	930				
	4-chloro-3-methylphenol		NL	NL	NL	NL	(no toxico	logical-specifi	c informatio	on available)
	4-clorophenyl-phenylether		NL	NL	NL	NL	(no toxico	logical-specifi	c informatio	on available)
218-01-9	Chrysene	mg/kg	780		17,000					
53-70-3	Dibenzo[a,h]anthracene	mg/kg	0.8		17					
	Dibenzofuran	mg/kg	NL 200 000	NL	NL	NL 2.300	(no toxico	logical-specif	c information	on available)
84-74-2	Di-n-butylphthalate	mg/kg	200,000	2,300 10,000	200,000	2,300				
117-84-0	Di-n-octylphthalate	mg/kg	41,000		4,100	10,000				
206-44-0	Fluoranthene	mg/kg	82,000 82,000		82,000					
86-73-7 193-39-5	Fluorene Indeno(1,2,3-cd)pyrene	mg/kg	82,000		82,000 170		1			
173-37-3	2-Methylnaphthalene	mg/kg	NL NL	NL	NL	NL	61,000		6,100	
	3&4-methylphenol	mg/kg	NL NL	NL NL	NL NL	NL NL		logical-specifi		m available)
91-20-3	Naphthalene	mg/kg	82.000	IAT	8,200	INL.	(NO TOXICO	rogical-specif	miormatic	ni availaule)
85-01-8	Phenanthrene	/1	NL	NL	8,200 NL	NL	61,000		6,100	
129-00-0	Pyrene	mg/kg mg/kg	61,000		61,000		0.1,000	<u>. </u>	5,100	<u> </u>
120-82-1	1,2,4-Trichlorobenzene	mg/kg	20,000	3,200	2,000	920	}			
1336-36-3	PCBs	mg/kg	1		1					
Inorganics	1	1 3 - 6	···			J		Background	Soil Level	
7440-38-2	Arsenic	ıng/kg	3	1,200	61	25,000		7.		
7440-39-3	Barium	mg/kg	140,000	910,000	14,000	870,000		1.		
7440-43-9	Cadmium	mg/kg	2,000	2,800	200	59,000		0.		
7440-47-3	Chromium, Trivalent	mg/kg	1,000,000		330,000			16		
7439-92-1	Lead	mg/kg	400		400			36		
7439-97-6	Mercury	mg/kg	610	540,000	61	52,000		0.0		

NOTES

- 1. Remedial objectives assume an institutional control is in place for land use as industrial/commercial
- 2. Remedial objectives assume migration to groundwater exposure route is excluded
- 3. NL = Not listed as Tier 1 Chemical
- 4. Background soil levels based on metropolitan statistical areas in Illinois
- 5. > = No limit (calculated Tier 2 level in excess of 1,000,000)

Metal Management Inc.

CPI Environmental Services, Inc

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Phone: 630-469-6340 Fax: 630-469-6470

Glen Ellyn, Illinois 60137

 Job No.

E-05-06-25-185

Finish

Start

Date: 8/31/00

Time: 7:40

Test Pit No:

101

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST		DESCRIPTION OF SOIL	SAMPLES
Surface				
1	·		Bituminous pavement Concrete - old piping/rebar 2" diameter steel pipe found at 1.5' below grade unknown source	
2			End of test pit at 1.5' Dimensions: 6' E-W x 10' N-S	
3				
4		•		
5				
6			•	
7				
8				
9				

CPI Environmental Services, Inc

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Fax: 630-469-6470

Start

Date: 8/31/00

Time: 7:45

Job No.

E-05-06-25-185

Finish

Date: 8/31/00

Time: 8:10

Test Pit No:

102

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:
Water Elevation:

Equipment: Inspector:

Frank Santella

CAT 215B

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
		Bituminous pavement	-
		Consists	
1	1	Concrete Possible old foundation	
		r ossible did idditidation	
2	damp	Fill: Black sand with gravel	S-101
1 2		- -	
		·	
3			
	moist	Brown-gray silty clay	S-102
	""	Start gray only ordy	0-102
4			
5			
		•	
6		End of test pit at 6.0'	
		Dimensions: 6' N-S x 3' E-W	
7			
8			
9			
•			·

CPI Environmental Services, Inc 799 Roosevelt Road Bldg 6, Suite 110 Phone: 630-469-6340 Glen Ellyn, Illinois 60137 Fax: 630-469-6470 Job No. E-05-06-25-185 Start Date: 8/31/00 Time: 8:20 103 **Finish** Time: 8:35 Test Pit No: Date: 8/31/00 Client; Site: Metal Management Cometco Corporation Surface Elevation: Excavator: B. Hough Construction Corp. Datum: Equipment: **CAT 215B** Water Elevation: Inspector: Frank Santella

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface		·	
		Asphalt and concrete	
1	damp	Fill: Black silty sand and gravel, railroad ties and track	
2			
3			
4			
5	moist	Brown and gray silty clay	
6		End of test pit at 5.5' Dimensions: 3'N-S x 8' E-W	
7			
8			
9		·	
•			

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Glen Ellyn, Illinois 60137

Fax: 630-469-6470

Start

Date: 8/31/00

Time: 8:35

Job No.

E-05-06-25-185

Finish

Date: 8/31/00

Time: 8:45

Test Pit No:

104

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface		Bituminous pavement	
1		Concrete	
2	wet	Fill: Black silty sand and gravel with pieces of brick, glass and wood	S-103
3			
4	moist	Brown and gray silty clay	S-104
5			
3		End of test pit at 5.0' Dimensions: 4' N-S x 8' E-W	
6			·
7			
8			
9			·

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Fax: 630-469-6470

Start

Date: 8/31/00

Time: 9:00

Job No.

E-05-06-25-185

Finish

Date: 8/31/00

Time: 9:10

Test Pit No:

105

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST		DESCRIPTION OF SOIL	SAMPLES
Surface				
			Bituminous pavement with crushed stone	
1			Fill: crushed stone with pieces of brick and concrete	
	damp		This ordered sterie war process of prior and correcte	
2				
2			·	
3				
4				
- ∓				
			·	
5				
			·	
6			•	·
U			Brown and gray silty clay	
	moist			
7		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	End of test pit at 7.0'	
			Dimensions: 3' N-S x 10' E-W	
8				
Ü				}
9				

CPI Environmental Services, Inc

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Start

Date: 8/31/00

Time: 9:15

Job No.

E-05-06-25-185

Finish

Date: 8/31/00

Time: 9:30

Test Pit No:

106

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	1	DESCRIPTION OF SOIL	SAMPLES
Surface				
			Bituminous pavement	
1			Crushed stone	
	40		Fill: Black silty sand and gravel with pieces of brick	S-105
2	damp		some silty clay	
3			Brown and gray silty clay	S-106
4	moist			
5				
6				
7				
ľ			End of test pit at 7.0' Dimensions: 5' E-W x 8' N-S	
8				
9				
Э				

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Glen Ellyn, Illinois 60137

Start

Date: 8/31/00

Time: 9:55

Job No.

E-05-06-25-185

Finish

Date: 8/31/00

Time: 10:15

Test Pit No:

107

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
1	moist	Fill: debris including metal, rubber, glass, aluminum, steel pipe, and pieces of coal	
2			
3			
. 4	1		
5		End of test pit at 5.0'	
6		Dimensions: 25' N-S x 40' E-W	
7			
8			
9			

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Start

Date: 8/31/00

Time: 10:30

Job No.

E-05-06-25-185

Finish

Date: 8/31/00

Time: 11:00

Test Pit No:

108

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL		SAMPLES
Surface				
,		Bituminous pavement and crushed stone		, , , , , , , , , , , , , , , , , , ,
1		Concrete		
•		Black silty sand and gravel with cinders, wood		S-107
2	damp		ĺ	
3				
4		Brown and gray silty clay		S-108
5	moist	Shown and gray sing day		3-100
6		. •		
7		End of test pit at 7.0'		
8		Dimensions: 5' E-W x 10' N-S		
9				
		·		
•				

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Start

Date: 8/31/00

Time: 11:05

Job No.

E-05-06-25-185

Finish

Date: 8/31/00

Time: 11:15

Test Pit No:

109

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
		Bituminous pavement	
1		Fill: black silty sand and gravel	S-109
2	damp	·	
3			
4			
5	moist	Brown and gray silty clay	S-110
6		,	
		End of test pit at 6.0' Dimensions: 4' E-W x 8' N-S	
7			
8			
•			
9			
•			

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Date: 8/31/00 Time: 11:20

Job No.

E-05-06-25-185

Finish

Start

Date: 8/31/00

Time: 11:45

Test Pit No:

110

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
		Bituminous pavement	
1	wet	Fill: Black silty sand and gravel with pieces of wood and brick	
2			
3	moist	Black and brown silty clay	
4			
5			
6			
7		End of test pit at 6.5' Dimensions: 3' N-S x 6' E-W	
8			
9			

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Start

Date: 8/31/00

Time: 12:20

Job No.

E-05-06-25-185

Finish

Date: 8/31/00

Time: 12:30

Test Pit No:

111

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST		DESCRIPTION OF SOIL	SAMPLES
Surface				
			Bituminous pavement	
1	moist		Fill: Crushed stone, black silty sand and gravel with cinders	·
2				
3		_	·	
	moist		Brown and gray silty clay	·
4	IIIOISI			
5 .			End of test pit at 4.5' Dimensions: 8' N-S x 4' E-W	
6				
7				
8				
9				

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Start Date: 8/31/00

Time: 12:40

Job No.

E-05-06-25-185

Finish

Date: 8/31/00

Time: 12:50

Test Pit No:

112

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST		DESCRIPTION OF SOIL	SAMPLES
Surface				
			Bituminous pavement	
1	damp		Fill: Crushed stone with black silty sand and gravel, pieces of coal	
2				
3	wet		Coal	
4		B8888888	End of test pit at 4.0'	
5			Dimensions: 3' N-S x 6' E-W	
6			•	
7				
8				
9		:		

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Date: 8/3.1/00

Time: 12:55

Job No.

E-05-06-25-185

Finish

Start

Date: 8/31/00

Time: 13:05

Test Pit No:

113

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
		Bituminous pavement	
1	wet	Fill: Brown and black silty sand and gravel with pieces of brick, metal, concrete, and some coal Old foundation	
2			
3			
4			
5		End of test pit at 5.0' Dimensions: 3' E-W x 8' N-S	
6			
7			
8			
9			
			·

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Glen Ellyn, Illinois 60137

Job No.

Start

Date: 8/31/00

Time: 13:10

E-05-06-25-185

Finish

Date: 8/31/00

Time: 13:25

Test Pit No:

114

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

inspector:

DEPTH	MOIST		DESCRIPTION OF SOIL	SAMPLES
Surface				
			Bituminous pavement	
1			Concrete	
	damp		Fill: Black and brown silty sand and pieces of coal	S-111
2				
3				
3	moist		Brown and gray silty clay	S-112
4		•	End of test pit at 3.5' Dimensions: 4' N-S x 6' E-W	
5				
6				
7				
8				
9				

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Glen Ellyn, Illinois 60137

Date: 8/31/00

Time: 13:25

Job No.

E-05-06-25-185

Finish

Start

Date: 8/31/00

Time: 13:40

Test Pit No:

115

Client:

Metal Management

Site:

Cometco Corporation.

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
		Bituminous pavement	
1		Concrete with rebar	
	damp	Fill: Black silty sand and gravel	
2			
3	moist	Brown and gray silty clay	
4			
5		End of test pit at 4.5' Dimensions: 3' N-S x 5' E-W	
6		•	
7			
8			
-			
9			
ę			

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Glen Ellyn, Illinois 60137

Time: 13:45

Job No. E-05-06-25-185

Finish

Start

Date: 8/31/00

Date: 8/31/00

Time: 13:55

Test Pit No:

116

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
		Crushed stone	
1 ·	moist	Fill: Brown-light gray silty clay, some coarse gravel Strong gasoline-like odor	S-113
2			
3	<u> </u>	Brown and gray silty clay	
4	moist	Brown and gray sitty day	
5		End of test pit at 5.0'	
6		Dimensions: 4' E-W x 6' N-S	
7			
8			
9	1-		

CPI Environmental Services, Inc. 799 Roosevelt Road Bldg 6, Suite 110 Phone: 630-469-6340 Glen Ellyn, Illinois 60137 Fax: 630-469-6470 Time: 14:30 Job No. Start Date: 8/31/00 E-05-06-25-185 117 **Finish** Date: 8/31/00 Time: 14:35 **Test Pit No:** Client: Metal Management Site: Cometco Corporation Surface Elevation: Excavator: B. Hough Construction Corp. Datum: **Equipment: CAT 215B** Water Elevation: inspector: Frank Santella

DEPTH	MOIST		DESCRIPTION OF SOIL	SAMPLES
Surface				
•		<i> }}}} </i>	Crushed stone	
1	damp		Fill: Brown and black silty sand, with pieces of metal	
2				
3	moist		Brown and gray silty clay, trace fine to coarse sand	S-114
4				
5				
			End of test pit at 5.0'	
			Dimensions: 3' E-W x 9' N-S	
6				
٠				
7				
•				
8	1			
9				
J				

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Fax: 630-469-6470

Start

Date: 8/31/00

Time: 14:40

Job No.

E-05-06-25-185

Finish

Date: 8/31/00

Time: 14:50

Test Pit No:

118

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
		Asphalt millings	
1	wet	Fill: Crushed stone (oil coated)	
2		Brown and gray silty clay	S-115
3	moist		
4		End of test pit at 3.5' Dimensions: 10' N-S x 15' E-W	
5			
6			
7			
.8			
9			

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slen Ellyn, Illinois 60137

Date: 8/31/00

Time: 15:15

Job No.

E-05-06-25-185

Finish

Start

Date: 8/31/00

Time: 15:25

Test Pit No:

119

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
1	·	Asphalt millings	
		Fill: Black and brown silty sand with pieces of metal and concrete	S-116
2	damp		
3	moist	Brown and gray silty clay, trace fine to coarse sand and gravel	S-117
4			
5			
6		End of test pit at 5.5' Dimensions: 4' N-S x 8' E-W	
7			
8			
9			

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Glen Ellyn, Illinois 60137

Date: 8/31/00 **Time:**

Job No.

E-05-06-25-185

Finish

Start

Date: 8/31/00

Time:

Test Pit No:

120

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
1	wet	Fill: Fine to coarse sand and gravel with crushed stone Stone oil soaked	S-118
2	wet	Fill: Black silty sand, some gravel	
3			
4	moist	Brown and gray silty clay, trace fine to coarse sand	S-119
5			
6		End of test pit at 5.5' * Dimensions: 4' E-W x 6' N-S	
7			
8			
9			
,			

CPI Environmental Services, Inc 799 Roosevelt Road Bldg 6, Suite 110 Phone: 630-469-6340 Fax: 630-469-6470 Glen Ellyn, Illinois 60137 E-05-06-25-185 Start Date: 9/1/00 Time: 7:30 Job No. Time: 7:45 121 **Finish Test Pit No:** Date: 9/1/00 Client: Site: Cometco Corporation Metal Management **Surface Elevation:** B. Hough Construction Corp. **Excavator:** Datum: Equipment: **CAT 215B** Water Elevation: Inspector: Frank Santella

DEPTH	MOIST		DESCRIPTION OF SOIL	SAMPLES
Surface				
	moist		Fill: Black silty sand and gravel with pieces of metal,	
			concrete, brick and wood	
1				
2	moist	********	Black and gray silty clay	S-120
			Possible fill	5,24
3				
3				
4				
	moist		Brown and gray silty clay, trace fine to coarse sand	
			and gravel	
5				
_			•	
6				
			•	
7				
,				
8				
			End of test pit at 8.0' Dimensions: 8' N-S x 3' E-W	
			Difficusions, o N-5 x 3 E-VV	
9				
				İ
·			· .	

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Fax: 630-469-6470

 Start
 Date: 9/1/00
 Time: 8:00
 Job No.
 E-05-06-25-185

 Finish
 Date: 9/1/00
 Time: 8:10
 Test Pit No:
 122

 Client:
 Metal Management
 Site:
 Cometco Corporation

Surface Elevation: Excavator: B. Hough Construction Corp.

Datum: Equipment: CAT 215B

Water Elevation: Inspector: Frank Santella

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
1	moist	Fill: Black-brown and gray silty sand and gravel, wood, concrete Strong petroleum-like odor encountered at 2.5'	
2		•	
3			
4	moist	Brown, black and gray silty clay	
5			
6		End of test pit at 6.0'	
7		Dimensions: 35' N-S x 4' E-W North end excavated to a depth of 6', south end to a depth of 3'	
8			
9			
·			

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Glen Ellyn, I	Illinois 60137				Fax: 630-469-6470
Start	Date: 9/1/00	Time: 8:20	_	Job No.	E-05-06-25-185
Finish	Date: 9/1/00	Time:		Test Pit No:	123
Client:	Metal Management		Site:	Cometco Corr	poration
Surface El	evation:	- 	Excavator:	B. Hough Cor	struction Corp.
Datum:			Equipment:	CAT 215B	
Water Elev	/ation:		Inspector:	Frank Santella	B

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
1	damp	Fill: Brown and black silty sand and gravel	S-121
2			
3		Concrete with green staining 8" thick	
4	moist	Black, brown and gray silty clay	
5		Possible fill	
6	moist	Brown and gray silty day	S-122
7		End of test pit at 7.0' Dimensions: 6' N-S x 4' E-W	
8			
9			

	CPI Enviro	nmental Service	es, Inc		
799 Roosevelt Road Bldg 6, Suite 110 Glen Ellyn, Illinois 60137					Phone: 630-469-6340 Fax: 630-469-6470
Start Date: 9/1/00	Time: 9:30	_	Job No.	E-05-06-25-	185
Finish Date: 9/1/00	Time: 9:40		Test Pit No:	124	
Client: Metal Management		Site:	Cometco Corr	ooration	
Surface Elevation:	· 	Excavator:	B. Hough Cor	struction Corp).
Datum:		Equipment:	CAT 215B		
Water Elevation:		Inspector:	Frank Santella	3	

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
	damp	Fill: Orange-brown silty sand and gravel	
1		Concrete	
		Fill: Black silty sand and gravel with railroad ties	S-123
2		Strong petroleum-like odor	
	damp		
3			
4	moist	Brown, black and gray silty clay	
5		End of test pit at 5.0'	
		Dimensions: 6' N-S x 4' E-W	
6		•	
7			
8			
9			
		·	
			İ

CPI Environmental Services, Inc

799 Roosevelt Road Bldg 6, Suite 110

Phone: 630-469-6340 Fax: 630-469-6470

Glen Ellyn, Illinois 60137

Start

Date: 9/1/00

Time: 9:50

Job No.

E-05-06-25-185

Finish

Date: 9/1/00

Time: 10:00

Test Pit No:

125

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface	.,		
		Bituminous pavement	
1		Fill: Black silty sand and gravel with coarse stone Strong petroleum-like odor	S-124
2	damp		
3			
4		Brown and gray silty clay, trace fine to coarse sand	S-125
5	moist		G-123
6		•	
7			
		End of pit at 7.0' Dimensions: 4' E-W x 6' N-S	
8			
9			
·			

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Start Date: 9/1/00

Time: 10:30

Job No.

E-05-06-25-185

Finish

Date: 9/1/00

Time: 10:40

Test Pit No:

126

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
1	wet	Fill: Crushed stone	
	wet	Fill: Black and brown silty clay	
3			
	moist	Black and gray silty clay, trace fine to coarse sand	S-126
4			
5		End of test pit at 5.0' Dimensions: 3' N-S x 8' E-W	
6			
7			
8			
9			

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Start

Date: 9/1/00

Time: 12:15

Job No.

E-05-06-25-185

Finish

Date: 9/1/00

Time: 12:30

Test Pit No:

127

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST		DESCRIPTION OF SOIL	SAMPLES
Surface				
1	damp		Fill: Brown and orange-brown	S-127
2	moist		Brown and gray silty clay	S-128
3				
4			End of pit at 4.0'	
5			Dimensions: 3' E-W x 20' N-S On north 3/4 of pit, concrete pad was present at a depth of 8" below fill South 1/4 of pit excavated to 4' below grade	
6				
7	-			
8				
9				
,				

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Start

Date: 9/1/00

Time: 12:40

Job No.

E-05-06-25-185

Finish

Date: 9/1/00

Time: 12:50

Test Pit No:

128

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
1		Fill: Crushed stone	
'		Concrete	
2		Fill: Coal and silty sand, trace brick concrete foundation wall trending E-W Oily water encountered and pieces of metal and wood	W-101
3	damp to moist	Only water encountered and pieces of metal and wood	
4			
5			
6	<u> </u>	End of test pit at 6.0'	
		Dimensions: 3' E-W x 6' NE-SW	
7			
8			
9			
		·	

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Fax: 630-469-6470

Start Date:

Date: 9/1/00

Time: 13:00

Job No.

E-05-06-25-185

Finish

Date: 9/1/00

Time: 13:15

Test Pit No:

129

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

		-		
DEPTH	MOIST		DESCRIPTION OF SOIL	SAMPLES
Surface				
·			Bituminous pavement	
1			Crushed stone	
2	damp		Fill: Black and brown silty sand with coarse stone	S-129
3				
4	moist		Brown and gray silty clay	S-130
5			End of test pit at 5.0'	
6			Dimensions: 8' E-W x 4' N-S	
7				
8				
9				

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Date: 9/1/00

Time: 13:20

Job No.

E-05-06-25-185

Finish

Start

Date: 9/1/00

Time: 13:20

Test Pit No:

130

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST		DESCRIPTION OF SOIL	SAMPLES
Surface				
			Fill: Black silty sand and gravel	
1		XXXXX	Crushed stone	
	damp		Black and gray silty clay Possible fill	
2			Possible IIII	
3	moist		Brown and gray silty clay, trace fine to coarse sand	S-131
4				W-102
5			End of test pit at 4.5' Dimensions: 4' N-S x 6' E-W	
			Water flowing into pit from layer of crushed stone.	
6				
7				
8				
9				

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.

Date: 9/1/00 Time: 13:40

Job No.

E-05-06-25-185

Finish

Start

Date: 9/1/00

Time: 13:45

Test Pit No:

131

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF	SOIL SAMPLES
Surface			
		Fill: Black and orange-brown silty sand	·
1			
2		Concrete with wood timber and steel pipe End of test pit at 2.0' Dimensions: 4' N-S x 5' E-W	pe at 1.5'
3		Dimensions, 4 14-0 X 0 E-W	
4			
5			
6			
7		·	
8			
9			

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Start

Date: 9/1/00

Time: 13:50

Job No.

E-05-06-25-185

Finish

Date: 9/1/00

Time:

Test Pit No:

132

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
1		Fill: Brown, black and gray silty clay with gravel, metal and glass	S-132
2			
3			
4		Concrete foundation exists on the N & S ends	
5		End of test pit at 5.0' *	
6		Dimensions: 10' N-S x 3' E-W	1
7			
8			
9			
,			

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Start Date: 9/1/00

Time: 14:10

Job No.

E-05-06-25-185

Finish

Date: 9/1/00

Time:

Test Pit No:

133

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST	DESCRIPTION OF SOIL	SAMPLES
Surface			
1	damp	Fill: Crushed stone with black silty sand and cinders	S-133
2			
3	moist	Brown and gray silty clay, trace fine to coarse sand	S-134
4			
5			
6		End of test pit at 5.5' Dimensions: 4' E-W x 6' N-S	
7			
8			
9			
•			

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Start Date: 9

Date: 9/1/00

Time: 14:30

Job No.

E-05-06-25-185

Finish

Date: 9/1/00

Time:

Test Pit No:

134

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

SEST.	LUCIOT	T	DECODITION OF CO.	OALADI EO
DEPTH	MOIST	<u> </u>	DESCRIPTION OF SOIL	SAMPLES
Surface			Concrete with steel I-beam	
			Concrete with steel i-beam	
1	damp		Fill: Black silty sand and gravel with cinders	S-135
2				
3	moist		Brown and gray silty clay	S-136
4				
5			End of test pit at 4.5' Dimensions: 4' N-S x 8' E-W	
6			•	
7				·
8				
9				

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Start

Date: 9/1/00

Time: 15:00

Job No.

E-05-06-25-185

Finish

Date: 9/1/00

Time: 15:10

Test Pit No:

135

Client:

Metal Management

Site:

Cometco Corporation

Surface Elevation:

Excavator:

B. Hough Construction Corp.

Datum:

Equipment:

CAT 215B

Water Elevation:

Inspector:

DEPTH	MOIST		DESCRIPTION OF SOIL	SAMPLES
Surface				
1	wet		Fill: Brown and gray silty clay Clay tile pipe (6") trending E-W encountered Filled pit with oil water Strong petroleum-like odor	W-103
2				
3			·	
Å		•	End of test pit at 3.5' Dimensions: 3' N-S x 5' E-W	
5				
6		·	•	
7				
8				
9				

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Start

Date: 10/11/00

Time: 7:25 AM

Job No.

E05-06-26-185

Finish

Date: 10/11/00

Time: 8:05 AM

Borehole No: B-201

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
1			Concrete, concrete base	,
			Fill: Sand, cinders, wood chips (blackened)	B-201, 2.5-3'
2	3.5			
3				
4		, -	Brown and gray silty clay, darkened, slight	
5			petroleum odor Brown and gray silty clay, slight discoloration from 5'-6	5'
6			(top soil?)	
7	5			
8				·
9				
			Boring terminated	

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Start

Date: 10/11/00

Time: 8:10 AM

Job No.

E05-06-26-185

Finish

Date: 10/11/00

Time: 8:30 AM

Borehole No: B-202

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Geoprobe Advanced 66 T

Water Elevation:

Inspector:

<u> </u>					
	Recovery	Moist		Description of Soil	Samples
Surface					
			C	oncrete (6"), concrete base	
4					
1			Fi Fi	ill: as B-201	B-202
· .					
2	2				
3					
İ					
4				·	
		-			
,					
5					
<u> </u>					
6				·	
D			G	Green and brown silty clay	
				, , ,	
_				·	
7	5			•	
!	}				ů.
8		1			
				·	
. 9				•	
1	[\			
			B	Boring terminated	

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Start

Date: 10/11/00

Time: 8:30 AM

Job No.

E05-06-26-185

Finish

Date: 10/11/00

Time: 9:00 AM

Borehole No: B-203

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist		Description of Soil	Samples
Surface					
				Concrete (6"), concrete base	
1					
				Fill, musty organic odor	
		,			
2				·	B-203 (2'-3')
					,
3				Boring terminated due to refusal at 3'	
J				Concrete (?)	
4					
		-			
5					-
3		·			
6					
)				
7					
7					ļ
8					
_	Ì				
9			1	·	
				·	
		<u></u>			

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Fax: 630-469-6470

Start

Date: 10/11/00

Time: 9:05 AM

Job No.

E05-06-26-185

Finish

Date: 10/11/00

Time: 9:25 AM

Borehole No: B-204

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Donah	D	Majak	1	Description of Call	Comples
	Recovery	Moist		Description of Soil	Samples
Surface	<u>-</u>				
				Concrete (6"), concrete base	
1					
·				Fill, as before; no apparent odor	B-204
2				·	
_	2				
3				·	
		•			
4	}				
· ·		-		,	
				·	
5				Boring terminated	
ľ					
6					
ľ			1	•	
7			1		
, '					
Ì					
8					
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1					
9			_		
		<u> </u>]		
			1		

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Start

Date: 10/11/00

Time: 9:25 AM

Job No.

E05-06-26-185

Finish

Date: 10/11/00

Time: 9:35 AM

Borehole No: B-205

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Geoprobe Advanced 66 T

Water Elevation:

Inspector:

[] () _	D I	14-2-4	D	0
	Recovery	Moist	Description of Soil	Samples
Surface		····	Concrete (6"), concrete base	
1			Fill	B-205
2	1			
3			Boring terminated due to refusal at 3'	·
4				
5				
6				
7		·		
8		·		·
9				

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Phone: 630-469-6340

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Start

Date: 10/11/00

Time: 9:40 AM

Job No.

E05-06-26-185

Finish

Date: 10/11/00

Time: 10:00 AM

Borehole No: B-206

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
1			Concrete (1'), concrete base	
2			Fill, silty clay, very strong diesel odor, blackened	B-206
3			Boring terminated due to refusal at 3.5'	
4		81		
5				
6				·
7				
8				
9				

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Start

Date: 10/11/00

Time: 10:15 AM

Job No.

E05-06-26-185

Finish

Date: 10/11/00

Time: 10:45 AM

Borehole No: B-207

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
	,		Concrete	
1		Į:	Sandy fill, no odor	sampled
2	2.5			
3				
4			4'-5' Silty clay, blackened (top soil?)	
5			5'-10' Gray and brown mottled silty clay	sampled
6				
7	5			
8				
9		- A		
			Boring terminated	

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Start

Date: 10/11/00

Time: 10:50 AM

Job No.

E05-06-26-185

Finish

Date: 10/11/00

Time: 11:30 AM

Borehole No: B-208

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Geoprobe Advanced 66 T

Water Elevation:

Inspector:

	Recovery	Moist	Description of Soil		Samples
Surface	· .				
			Drilled through 1.5' concrete		
				ŀ	
1					
	· /				
2	-		Fill, strong petroleum odor		
	2"				
		-			
3					
				İ	
4		٠	Fill, strong petroleum odor		
		*	Till, strong petroleant oddi		
_					
5			Brown and gray silty clay		
			in the first that the second s		
C					
6					
			Market (All Control of the Control o		
7					
•					
8		,			,
	1				
.9			Boring terminated		
			· ·		
	<u> </u>				

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Fax: 630-469-6470

Start

Date: 10/11/00

Time: 12:30 PM

Job No.

E05-06-26-185

Finish

Date: 10/11/00

Time: 12:45 PM

Borehole No: B-209

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
			Concrete	
			Fill	
1				
,				
2				
	4			
			Classes #11 of the considerable and out of the considerabl	
3			Clayey fill with wood; black, petroleum and sewer-like	
			odor	ŀ
4				
		~		
5				
J				
				1.
6			•	
			•	
7			D 1 91 1	
			Brown and gray silty clay	
8				•
		-		
9				
ਝ				
			Boring terminated	

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Start

Date: 10/11/00

Time: 12:45 PM

Job No.

E05-06-26-185

Finish

Date: 10/11/00

Time: 1:15 PM

Borehole No: B-210

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Geoprobe Advanced 66 T

Water Elevation:

Inspector:

	Recovery	Moist		Description of Soil	Samples
Surface					
				Asphalt	
				Fill	
1				Old concrete - bored through	
				Fill - Dark brown and black (cinders, foundry sand,	sampled
				interbedded silty clay), no apparent odor	
2	2.5				
	2.0				
3				·	
4		ſ			
7		-		· _	
5				·	
					•
6			*****	Drawn and grow sithy along	
				Brown and gray silty clay	
7	3.5	÷			
8					
O					
	į			·	
9					
t					
	<u>L</u>			Boring terminated	

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Start

Date: 10/11/00

Time: 1:15 PM

Job No.

E05-06-26-185

Finish

Date: 10/11/00

Time: 1:50 PM

Borehole No: B-211

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist		Description of Soil	Samples
Surface					
				2" Concrete	
			l‱‱∏r	Fill, as before (B-210)	sampled
1					•
1					
2					
2	2			,	
3 -					
J.					
4				·	
7				·	
				•	
5					
3					
6					
				Brown and gray silty clay	
÷					
7					
•	5				
8				:	
O					
9					
J					
				Boring terminated	

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Start

Date: 10/12/00

Time: 8:30 AM

Job No.

E05-06-26-185

Finish

Date: 10/12/00

Time: 9:25 AM

Borehole No: B-212

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Deidrich D-120

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
1				
2			Fill: Dark brown and black, sandy, wood fragments,	sampled
3	8"		no odor	•
4		٧		
5	1'		Gray and brown mottled silty clay	sampled
6			•	Shelby tube
7	100%			collected from 6'-8'
8			Boring terminated	
9				The state of the s

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Start

Date: 10/12/00

Time: 9:30 AM

Job No.

E05-06-26-185

Finish

Date: 10/12/00

Time: 10:15 AM

Borehole No: B-213

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Deidrich D-120

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface			Bituminous pavement	
	-	wet		
1				
2		wet	Fill, sandy, brown	
3	4"		Concrete encountered, split spoon refusal at 3'	
J			Split spoon refusal at 3'; concrete (?)	
4		•	7	
5		·		·
•	·		Bluish aggregate (?)	
6	-	wet		
7	1"		Brown and gray silty clay	sampled
,				
8				
				Shelby tube sample 8'-10
9	75%			
			Boring terminated	

CPI Environmental Services, Inc

799 Roosevelt Road Bldg 6, Suite 110 Glen Ellyn, Illinois 60137

Phone: 630-469-6340

Fax: 630-469-6470

Start

Date: 10/12/00

Time: 10:30 AM

Job No.

E05-06-26-185

Finish

Date: 10/12/00

Time: 11:00 AM

Borehole No: B-214

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Deidrich D-120

Water Elevation:

Inspector: S. Schlichtholz

	Recovery	Moist		Description of Soil	Samples
Surface				Pervious	
1				Sandy fill - coal, brick layers, interbedded clays	
2	1'9"	: ·			
3					·
4	1'3"	4		6" Dark gray and dark brown mottled silty clay	
5				5" As above, not as dark	Shelby tube
6	75%			-	collected from 5'-7'
7				Boring terminated	
8			<u> </u>		
9					
·					

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Start

Date: 10/12/00

Time: 12:05 PM

Job No.

E05-06-26-185

Finish

Date: 10/12/00

Time: 12:25 PM

Borehole No: B-215

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Deidrich D-120

Water Elevation:

Inspector:

			S. Colindation		
	Recovery	Moist	Description of Soil	Samples	
Surface	,				
1.			Asphalt		
2	1'		Wood fragments		
3			Brown sandy fill Fill: Orangish-brown and purplish, gritty	sampled	
4	1'				
5			Boring terminated	· · · · · · · · · · · · · · · · · · ·	
6					
7					
8					
9			·		
		**************************************		_	

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Phone: 630-469-6340

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Start

Date: 10/12/00

Time: 12:40 PM

Job No.

E05-06-26-185

Finish

Date: 10/12/00

Time: 1:05 PM

Borehole No: B-216

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment: Deidrich D-120

Water Elevation:

Inspector:

Depth	Recovery	Moist		Description of Soil	Samples
Surface				· · · · · · · · · · · · · · · · · · ·	
1			Concret	te	
	1'6"	moist	Fill, blad	ck gritty	sampled
2	·				
3	ī	i -			
4	1"	-c		ay and dark brown mottled silty clay	sampled
5			Boring t	terminated	
6				•	
7					
8					
9					

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Start

Date: 10/17/00

Time: 9:10 AM

Job No.

E05-06-26-185

Finish

Date: 10/17/00

Time: 9:35 AM

Test Pit No: TP-301

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Excavator:

Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

Inspector:

Depth	Moist	Description of Soil	Samples
Surface		Surface: Tin plate stockpile	
. 1		0-6" Brown scrap yard soil 6"-1.5' Black, very odorous scrap yard soil	sampled
2		1.5' Bottom of test pit	
3			
4			
5	"		
6			
7			
8			
9			
		·	

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Start

Date: 10/17/00

Time: 9:40 AM

Job No.

E05-06-26-185

Finish

Date: 10/17/00

Time: 9:50 AM

Test Pit No: TP-302

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Excavator:

Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

Inspector:

Depth	Moist	Description of Soil	Samples
Surface		Surface: Tin plate remnants, box storage	
1		0-6" Brown scrap yard soil 6"-1.5' Fill, sandy with coal fines and orangish layers	sampled
2		1.5' Bottom of test pit	•
3 .			
· 4			
5			
6		•	
7			
8			
9			

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Start

Date: 10/17/00

Time: 10:30 AM

Job No.

E05-06-26-185

Finish

Date: 10/17/00

Time: 11:00 AM

Test Pit No: TP-303

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Excavator: Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

Inspector: S. Schlichtholz

Depth	Moist	Description of Soil	Samples
Surface			
	dry	0-6" Brown scrap yard soil with turnings 6"-3' Black scrap yard soil	TP-303S TP-303
1			
2			
3		3' Clay; End test pit	
4			
5		·	
6			
7			
8			
9			

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Fax: 630-469-6470

Start

Date: 10/17/00

Time: 11:00 AM

Job No.

E05-06-26-185

Finish

Date: 10/17/00 -

Time: 11:20 AM

Test Pit No: TP-304

Client:

Metal Management

Surface Elevation:

Site:

Cometco

unknown

Excavator: Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

Inspector: S. Schlichtholz

Depth	Moist	Description of Soil	Samples
Surface			
		Could not excavate - ground too compacted	
1			
2			
3			
4			
5			
1			
6		•	
7			
8			
9			

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Start

Date: 10/17/00

Time: 1:00 PM

Job No.

E05-06-26-185

Finish

Date: 10/17/00

Time: 1:20 PM

Test Pit No: TP-305

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Excavator:

Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

Inspector:

Depth	Moist		Description of Soil	Samples
Surface				
1			0-3" Scrap yard soil, asphalt 3"-1' Coal fragments 1' Bottom of test pit	
2				
3 .			·	
4		,		
5				
6				
7				
8				
9				

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Fax: 630-469-6470

Start

Date: 10/17/00

Time: 1:40 PM

Job No.

E05-06-26-185

Finish

Date: 10/17/00

Time: 2:00 PM

Test Pit No: TP-306

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Excavator:

Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

inspector:

Depth	Moist		Description of Soil	Samples
Surface				
1		0-2" S	Surface scrap yard soil ' Bituminous pavement? Degraded	TP-306S
		11" Co	oncrete - could not penetrate; End test pit	
2				
3				
4				
5				
6			•	
7				
8				
9				
		_		

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Start

Date: 10/17/00

Time: 2:02 PM

Job No.

E05-06-26-185

Finish

Date: 10/17/00

Time: 2:45 PM

Test Pit No: TP-307

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Excavator:

Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

Inspector:

Depth	Moist		Description of Soil		Samples
Surface					
		Could not pe	netrate ground surface		
1					
2					
3					
4					
5					
6			•		
7					1
8					
9				,	
·					

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Phone: 630-469-6340

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Start

Date: 10/18/00

Time: 8:40 AM

Job No.

E05-06-26-185

Finish

Date: 10/18/00

Time: 9:45 AM

Test Pit No: TP-308

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Excavator:

Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

Inspector:

Depth	Moist		Description of Soil	Samples
Surface				
1			0-4" Asphalt 4"-1.5' Concrete, concrete base	
2			1.5' Black sandy fill with metal fragments; End test pit	sampled
3				
4				
5				
6		·		
7	·			
8				
9				

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Start

Date: 10/18/00

Time: 9:50 AM

Job No.

E05-06-26-185

Finish

Date: 10/18/00

Time: 10:15 AM

Test Pit No: TP-309

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Excavator:

Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

Inspector:

Depth	Moist	Description of Soil	Samples
Surface			
	moist	Dark brown scrap yard soil	sampled
1			
2		1.5' Concrete, could not penetrate; End test pit	
3			
4			
5			
6		r	
7			
8			
9			

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Start

Date: 10/18/00

Time: 10:30 AM

Job No.

E05-06-26-185

Finish

Date: 10/18/00

Time: 10:50 AM

Test Pit No: TP-310

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Excavator:

Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

Inspector:

Depth	Moist	Description of Soil	Samples
Surface			
,		0-2" Asphalt 2"-1': 2" Crushed rock and brown scrap yard soil	
1		1'-2' Black scrap yard soil with metal fragments and coal	sampled
2		2' Bottom of test pit	
3			
4			
5			
6		-	
7			
8			
9			

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Start

Date: <u>10/</u>18/00

Time: 11:05 AM

Job No.

E05-06-26-185

Finish

Date: 10/18/00

Time: 11:45 AM

Test Pit No: TP-311

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Excavator:

Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

Inspector:

Depth	Moist		Description of Soil	Samples
Surface				
			0-1.5' Broken concrete pad	
1				
2			1.5'-2' Black scrap yard soil, petroleum odor	sampled
			2' Decayed planks; End test pit	٠
3 .				
4				
5				
Ţ				
6				
	-		•	
. 7		*		
8				
<u> </u>				
0				
9				

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Start

Date: 10/18/00

Time: 12:10 PM

Job No.

E05-06-26-185

Finish

Date: 10/18/00

Time: 12:25 PM

Test Pit No: TP-312

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Excavator:

Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

Inspector:

Depth	Moist	Description of Soil	Samples
Surface			
1	dry	0-1' Brown scrap yard soil 1' Old rail ties; very strong creosote odor 1' Bottom of test pit	TP-312S
2	-		
3			
. 4			
5			
6		· · · · · · · · · · · · · · · · · · ·	
7	·		
8			
9			

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Start

Date: 10/18/00

Time: 1:30 PM

Job No.

E05-06-26-185

Finish

Date: 10/18/00

Time: 2:00 PM

Test Pit No: TP-313

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Excavator:

Carl Lisek

Datum:

N/A

Equipment: Bobcat X320

Water Elevation:

Inspector:

Depth	Moist		Description of Soil	Samples
Surface				
,	dry		0-1.5' Brown scrap yard soil and 3" crushed aggregate	
1	moist		1.5-2' Black scrap yard soil intermingled with clay	sampled
2			2' Bottom of test pit	
3				
4			·	
5		*		
6				
. 7				
8				·
9			· .	

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Phone: 630-469-6340

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Start

Date: 10/24/00

Time: 7:20 AM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 7:35 AM

Borehole No: B-314

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown -

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
1		moist	0-6" Asphalt 6"-3.5' Fill: Black, white and brown silt, sand, and gravel; gritty	sampled
2	3			
3				
4.		moist	3.5'-5' Darkened green and brown silty clay	
5			Boring terminated	
6				
7				
8				
9				

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Start

Date: 10/24/00

Time: 7:40 AM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 7:55 AM

Borehole No: B-315

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface		······································		
1		-	0-2' Concrete and crushed stone base	
2	4	moist	2'-4' Black silt and sand; gritty fill with gravel; petroleum odor	sampled
3	-			
4		و	4'-5' Brown and gray silty clay	
5			Boring terminated	
6			· · · · · · · · · · · · · · · · · · ·	
7				
8				
9				

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Start

Date: 10/24/00

Time: 8:00 AM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 8:25 AM

Borehole No: B-316

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist		Description of Soil	Samples
Surface			<u> </u>		
1		moist		0-2.5' Fill: White and black, gritty, slight petroleum odor	
2	. 5	wet		2.5'-4' Fill: Black, sandy, gritty, strong petroleum odor	sampled
3					
4		ء		4'-5' Darkened brown and gray silty clay	
5				Boring terminated	
6					
7					
8				·	
9					

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Start

Date: 10/24/00

Time: 8:30 AM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 8:45 AM

Borehole No: B-317

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface		WOSt	Description of Jon	Campies
. 1		moist	0-2.5' Black and brown sandy fill with wood layer at 2.4'; solvent/petroleum odors	sampled
2	4			
3			2.5'-5' Brown and gray silty clay	
4		. 4		
5			Boring terminated	
6				
7				
8				
9				

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Start

Date: 10/24/00

Time: 8:50 AM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 9:05 AM

Borehole No: B-318

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist		Description of Soil	Samples
Surface					
		moist		0-2' Brown, gritty, sand and gravel fill with wood (new)	sampled
				fragments >2"; slight petroleum odor	
1					
				·	
2	4			2'-5' Brown and gray silty clay, no discoloration or odor	
3					
_		-			
4					
-		æ.			
5				Boring terminated	
v		"			
				·	
6					
				•	
7					
,			1.		
8					
9					

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Phone: 630-469-6340

Fax: 630-469-6470

Start

Date: 10/24/00

Time: 9:10 AM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 9:30 AM

Borehole No: B-319

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface		·····		
		wet	(1') Dark brown and black sand and gravel, gritty, fill,	
·			medium petroleum odor, metal fragments	sampled
1				
			(1') Black, gritty, sandy, fill with gravel and coal fragments	
2	2			
3				
4				
		•		
5			(1') As above	
			(1) As above	
_				
6		moist	(2') Brown and gray silty clay, no discoloration or odor	
٠			feriferieri Generalisi	
7	_		frinterierd Georgester	
	2.5			
1				
8				
9				
3				
				1
			Boring terminated	

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Start

Date: 10/24/00

Time: 9:35 AM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 9:55 AM

Borehole No: B-320

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown ·

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

	Recovery	Moist		Description of Soil	Sam	ples
Surface						
				d turnings, scrap yard soil		
			6"-11" Concre			أمساسا
1		wet	11'-4 Black a	and dark brown sand and gravel fill	sam	pled
2						
۷	3.5				•	
3						
	;					
4.						
-4			4'-5' Brown a	nd gray silty clay		
		-46	``````````````````````````````````````			
5			Boring termin	nated		
			·	·		
6						
О					į.	
7						
. 0	:					
8						
9						
!						

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Start

Date: 10/24/00

Time: 10:00 AM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 10:25 AM

Borehole No: B-321

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
		moist	0-1' Brown scrap yard soil, slight petroleum odor	sampled B-321, 0.5'
1		dry	1'-2' Concrete	
· 2	4.5	wet	2'-3' Black silt, sand and gravel fill, gritty, odor	sampled B-321, 2.5'
3			3'-5' Green and gray mottled silty clay, darkened, no odor	
4				
5			Boring terminated	
6				
7				
8				
9				

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Fax: 630-469-6470

Start

Date: 10/24/00

Time: 10:30 AM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 11:35 AM

Borehole No: B-322

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	 Description of Soil	Samples
Surface	i vecovei y	MOISE	Description of Soli	Jampies
Suriace		moist	0-1' Brown scrap yard soil as B-321, 0.5'	sampled
1		wet	1'-4.5' Black gritty sand and gravel fill as B-321, 2.5'	
2	4.5			
3				
4				
5			4.5'-5' Green and gray mottled silty clay, as B-321, no odor Boring terminated	
6			•	
7				
8		٠		
9				

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Phone: 630-469-6340

Fax: 630-469-6470

Start

Date: 10/24/00

Time: 11:40 AM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 12:05 PM

Borehole No: B-323

· Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

	Recovery	Moist		Description of Soil	Samples
Surface					
. 1		dry		0-3" Asphalt 3"-2.2' Asphalt millings and black and white fill; scrap yard soil (metal fragments)	sampled
2	4.5	moist		2.2'-2.5' Brown and gray silty clay	
3				2.5'-3.5' Black sand and gravel gritty fill	
4	-			3.5'-4' Wood fragments, decayed	
5		•		4'-5' Brown and gray mottled silty clay, no discoloration Boring terminated	
Ů			·		
6					
7					
8					
9					

CPI Environmental Services, Inc

799 Roosevelt Road Bldg 6, Suite 110

Glen Ellyn, Illinois 60137

Phone: 630-469-6340

Fax: 630-469-6470

Start

Date: 10/24/00

Time: 12:10 PM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 12:20 PM

Borehole No: B-324

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface			Decemption of Con	Campies
		moist	0-6" Scrap yard soil, slight odor 6"-1' Crushed stone and clean sand	
1			1'-2' Black and brown silty sand with coarse stone, slight petroleum odor	sampled
2		,	2'-5' Brown and gray silty clay	
3		,		
4		4		
		-		
5		İ	Boring terminated	
Ů			·	
6			v	
7	-			
			•	
8				
9				

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Phone: 630-469-6340

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Start

Date: 10/24/00

Time: 12:25 PM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 12:35 PM

Borehole No: B-325

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
		moist	0-2' Scrap yard soil	sampled
1				
2	4.5	dry	2'-4' Brown and gray silty clay fill (disturbed), no odor	
3				
		damp		
5		moist	5'-6' Brown and gray silty clay	
6			6'-10' Brown and gray silt to clayey silt	
7	4			
8				
9				
	,		Boring terminated	

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Phone: 630-469-6340

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Start

Date: 10/24/00

Time: 12:40 PM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 1:00 PM

Borehole No: B-326

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown -

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
		moist	0-1' Silt, sand, and gravel fill - oily	
1			1'-1.5' Crushed stone and sand (clean)	
			1.5'-2.5' Black sandy fill with coal	
2	4.5		2.5'-3' Orangish-yellow sand fill	
3.			3'-5' Brown and gray silty clay fill (coal fragments, glass,	
4.			stone)	
5			5'-10' Brown and gray silty clay	
6		÷		
7	5			
8		•		
9				
			Boring terminated	

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Start

Date: 10/24/00

Time: 1:10 PM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 1:30 PM

Borehole No: B-327

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
	·	,	0-6" Bituminous pavement (black tarry with rounded gravel) or asphalt millings	
1		damp	6"-14" Crushed rock 14"-3' Black sandy, gritty fill with coal fines nearer bottom	sampled
2	5	moist		
3	,		3'-3.5' Concrete	
,			3.5'-5' As 14"-3' above with coal fines	
4				
5			5'-6' As above	
6			6'-10' Gray and brown silty clay fill with glass,	
7			coal fragments, skunk (?) odor	
,	3			
8				
9				·
			Boring terminated	:

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Start

Date: 10/24/00

Time: 1:40 PM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 1:50 PM

Borehole No: B-328

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist		Description of Soil	Samples
Surface					
		wet		0-3" Fill: Sand and gravel; oil saturated	sample
				3"-1' Fill: 3" Crushed stone, oil saturated	oil sample
1				4101570 0 1 111 1 1 1 1 1 1 1 1	
				1'-3' Fill: Sand, silt and gravel, slightly stained	
2					
				,	
3					
٥		moist		3'-5' Brown and gray silty clay with trace gravel; slight oil	·
				impact confined to vertical veins	
4					
				Boring terminated	
5			3.3.3.3.3.3.3	Dorning to minuted	
				Note: Water/oil level sustained @ 3" BGS for 15 minutes	
6		·		J	
	!				
7					
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8					
9				·	
•					

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Glen Ellyn, Illinois 60137

Fax: 630-469-6470

Start

Date: 10/24/00

Time: 2:00 PM

Job No.

E05-06-26-185

Finish

Date: 10/24/00

Time: 2:30 PM

Borehole No: B-329

Client:

Site:

Cometco

Surface Elevation:

Metal Management

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

	Recovery	Moist	Description of Soil	Samples
Surface				
ı		wet	0-6" Fill: Black silt, sand and gravel, petroleum odor	sampled
		wet	6"-1' Fill: Crushed stone, not oil-saturated	
1	ļ		44-01-5770-5	
		moist	1'-2' Fill?: Brown and gray silty clay	
2			2'-5' As above with black gritty sandy interbeds	
			2 0 7 10 000 10 11 11 12 11 15 15 15 15 15 15 15 15 15 15 15 15	
3				
4				
		_		
_			Boring terminated	
5				
6				
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7				1
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			,	
9				

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Fax: 630-469-6470

Glen Ellyn, Illinois 60137

Date: 10/25/00

Time: 7:50 AM

Job No.

E05-06-26-185

Phone: 630-469-6340

Finish

Start

Date: 10/25/00

Time: 8:20 AM

Borehole No: B-330

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
		moist	0-6" Fill: Brown scrap yard soil	sampled
			6"-9" Bluish aggregate (concrete?), slight odor	
1				
			9"-2.5' Concrete, 1" staining on surface	
2	4.5			
	4.5			
		moist	2.5'-5' 1" Black fill with coal fines (petroleum odor) overlying	
3		moist	brown and gray silty clay with fine gravel displaying	
			discoloration in top 6" (possible fill)	
			7	
4				
		<		
5				
J		moist	5'-10' brown and gray silty clay	
6				
_			Note: Water in borehole	
7	_			
	5			
	·			
8				
0				
9				
i				
			Boring terminated	

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Phone: 630-469-6340

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Start

Date: 10/25/00

Time: 8:25 AM

Job No.

E05-06-26-185

Finish

Date: 10/25/00

Time: 8:30 AM

Borehole No: B-331

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist		Description of Soil	Samples
Surface					
		moist		0-6" Fill: Brown scrap yard soil	
-			<u>~~~~</u>	6" concrete; could not penetrate; boring terminated	
1				·	
			?		
2					
~					
			ŀ	·	
3					
				Note: Moved 5' south, still concrete, boring terminated	
4					
~				·	
•		-			
5					
6					
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·				•	
7					
8			İ	·	
Ü	,				
9				·	

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Phone: 630-469-6340

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Start

Date: 10/25/00

Time: 8:35 AM

Job No.

E05-06-26-185

Finish

Date: 10/25/00

Time: 8:45 AM

Borehole No: B-332

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	<u> </u>	Description of Soil	Samples
Surface					
		moist-		0-2.5" Fill: Brown, black and light tan sand, silt, and fine	
1		dry		gravel; slight petroleum odor	
1					
				•	
2	4.5				
1					
3		moist		2.5'-3.0' Concrete (1" concrete staining)	
				3.0'-5.0' Fill: Black with coal fragments and fines; wood	
				(decayed) layer at 4.0'; silt, clay, sand and gravel, strong petroleum odor	sampled
4 .				Strong petroleum odol	Sampled
5				Boring terminated	
-					
6				,	
				*	
7					
1					
8					
9					

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Start

Date: 10/25/00

Time: 8:50 AM

Job No.

E05-06-26-185

Finish

Date: 10/25/00

Time: 9:05 AM

Borehole No: B-333

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
		.dry	0-2.5' Light brown sand and gravel fill with brick fragments, no odor	
1				
2	4.5			
3			2.5'-3' Concrete	
3		ů.	3'-4' Silty clay fill, strong gasoline odor	
- 4		moist		
÷	·		4'-5' Fine sand fill with strong gasoline odor	sampled
·				near top
5	water	wet		of sandy
			5'-8.5' As above, gasoline odor throughout	fill
6				
7	5			
	Ü			
8			8.5'-10' Brown and gray silty clay	
9				
			Boring terminated	

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Start

Date: 10/25/00

Time: 9:10 AM

Job No.

E05-06-26-185

Finish

Date: 10/25/00

Time: 9:25 AM

Borehole No: B-334

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist		Description of Soil	Samples
Surface					
		-		t, sand, and gravel with clayey layers and coa	i
			fine layers	near base; slight petroleum odor	
1.					
_					
2	4.5				
				•	
3			2.5'-5.0' Very	soft material, could not recover	
-					
4					
		-		•	
- 5					
5		wet		d clay fill with layers of clay-rich material;	
			medium ga	asoline odor	
6					
				•	
_			7'-7 5' Sand	and fine gravel fill; medium gasoline odor	sampled
7	5			and the gravering moduling goodine oder	Janpied
			7.5'-10' Brow	vn and gray silty clay	
8			**		
_					
			*		
9					
•					
			Boring termin	nated	

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Start

Date: 10/25/00

Time: 9:30 AM

Job No.

E05-06-26-185

Finish

Date: 10/25/00

Time: 9:35 AM

Borehole No: B-335

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

	Recovery	Moist	Description of Soil	Samples
Surface				
1	<i>.</i> .	moist	0-1' Fill: Blackened decayed wood and fine sand underlying silty clay 1'-5' Brown and gray silty clay; top 6" blackened (top soil?),	sampled
2	4.5		no odor	
3				
4	,			
5			Boring terminated	
6				
7				
8				
9				

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Start

Date: 10/25/00

Time: 9:40 AM

Job No.

E05-06-26-185

Finish

Date: 10/25/00

Time: 10:00 AM

Borehole No: B-336

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

	-				
	Recovery	Moist		Description of Soil	Samples
Surface					
1		moist	o√	Fill: Brown and light tan silt, sand and gravel verlying blackened silty sand; silty clay and decayed bood; gasoline odor	sampled
2	5			Brown and gray silty clay; top 3" blackened (top soil?),	
3			no c	odor	
4					
5		-	Bori	ing terminated	
6					
7				•	
8					
9					

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Phone: 630-469-6340

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Start

Date: 10/25/00

Time: 10:10 AM

Job No.

E05-06-26-185

Finish

Date: 10/25/00

Time: 10:25 AM

Borehole No: B-337

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil .	Samples
Surface				
		moist	0-3" Dark reddish brown scrap yard soil, sticky, oily,	
			petroleum odor	
1		dry	3"-1' Brown scrap yard soil, not as apparently oily, odor 1'-5' Stiff brown and gray silty clay (possible fill)	sampled
		ury	(possible fill)	
ا ا				
2				
3			100 7 003 100 000 000	
4				
4				
		-		
5		. ماسر	Manager St. 401 December of accessible of ac	
		dry	5'-10' Brown and gray silty clay	
			factorial lacatad	
6				
7	- 5			
	· 5			
_				
8				
-				
9				
			8404000 8404000	
			Boring terminated	

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Start

Date: 10/25/00

Time: 10:30 AM

Job No.

E05-06-26-185

Finish

Date: 10/25/00

Time: 10:35 AM

Borehole No: B-338

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown -

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
		moist	0-1' Fill: 3" Reddish-brown silt, sand and gravel overlying	
			brown crushed stone, silt and sand with black silt and	sampled
1		al	sand	
		dry	1'-5' Stiff brown and gray silty clay (possible fill)	
2	4.5			
3				
3			Sections of the section of the secti	
4				
		-		
_				
5		moist	5'-10' Brown and gray silty clay	
6			tacaca tacaca	
J			સિલ્લાલા સિલ્લાલા	
7	5			
	ວ			
8				
9				
Ü				
			Boring terminated	

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Start

Date: 10/25/00

Time: 10:40 AM

Job No.

E05-06-26-185

Finish

Date: 10/25/00

Time: 10:50 AM

Borehole No: B-339

Client:

Metal Management

Site:

_ _ _ ..

.....

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist		Description of Soil	Samples
Surface					
		dry-		0-2.5' Fill: Brown silt, sand, and gravel with metal fragments	sampled
		moist		overlying black sandy fill with coal fines	
1				·	
2					
3		moist		2.5'-5' Brown and gray silty clay with fine gravel	
4		· .			
5				Boring terminated	
6					
				• •	
7					
8				,	
9					
L	I		1		

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Start

Date: 10/25/00

Time: 10:55 AM

Job No.

E05-06-26-185

Finish

Date: 10/25/00

Time: 11:00 AM

Borehole No: B-340

Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
1		dry- moist	0-1.5' Brown silt, sand and gravel fill with metal fragments (as B-339)	sampled
2	4.5		1.5'-1.75' Crushed rock 1.75'-5' Brown and gray silty clay	
: 3				• .
4		,		
5			Boring terminated	
6			•	
7				
8				
9 .				

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Start

Date: 10/25/00

Time: 11:05 AM

Job No.

E05-06-26-185

Finish

Date: 10/25/00

Time: 11:15 AM

Borehole No: B-341

· Client:

Metal Management

Site:

Cometco

Surface Elevation:

unknown

Driller:

Rock & Soil Drilling

Datum:

N/A

Equipment:

Geoprobe Advanced 66 T

Water Elevation:

Inspector:

Depth	Recovery	Moist	Description of Soil	Samples
Surface				
		dry-	0-2.5' As B-340, strong petroleum odor	sampled
		moist		
1				
•				
2				
	4.5			
			2.5'-5' Brown and gray silty clay fill, no odor	
3				
	i			
4				
		4		
_				
5			5'-6' Wood (tie back?)	
6				
J			6'-10' Brown and gray silty clay	
7				
	5			
8				
9				
			Boring terminated	